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Life in ANCIENT VARANASI

AN ACCOUNT BASED ON ARCHAEOLOGICAL EVIDENCE

954.251
SIN-L

BIRENDRA PRATAP SINGH

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in

ANCIENT VARANASI

AN ACCOUNT BASED ON
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Varanasi has unique distinction of being known as the oldest city in the world. No other city in India has attracted the attention of scholars in the manner Varanasi has. It is thus not surprising that this city has been the main focus of study by a number of authors, almost all of these must include portions on the past history and traditions of city. These mainly rely on the knowledge about ancient Varanasi as preserved in religious texts and scriptures.

The present volume on ancient Varanasi is substantially different from the previous attempts. Here the author has for the first time traced the cultural history of ancient Varanasi from archaeological sources. This is thus not a story of the kings and princes who ruled the city. Instead one gets a glimpses how the people lived, what kind of dwellings they built in the city, what was the status of the crafts and the trade connected with them. What were the utensils being used by the commoner or the elite of the ancient city. In the course of the present volume, the reader is able to get information about these aspects of life and also about their food habits, kitchen equipments, costumes, jewellery and other means of embellishments. Besides, a full chapter is devoted to town-planning, where one reads about the city wall, moats, roads, lanes and other public buildings through the ages.

The author makes a fascinating study of the material unearthed from the excavations at Rajghat the site of ancient Varanasi. Not only he has made a detailed study of the published accounts of the excavations, but has also included for the first time findings of the small scale excavation conducted by the author in the year 1977-78.

Although relying mainly on the archaeological evidence, the author has taken note of the corresponding literary evidence at several places. In doing so he has shown commendable balance of judgement in the use of the two types of evidence-literary and archaeological, not always in agreement with each other. One of the noteworthy

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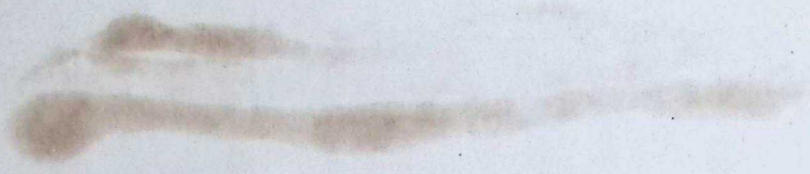

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LIFE IN ANCIENT VARANASI

(An account based on Archaeological Evidence)

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Life in Ancient Varanasi

(An account Based on Archaeological Evidence)

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BIRENDRA PRATAP SINGH

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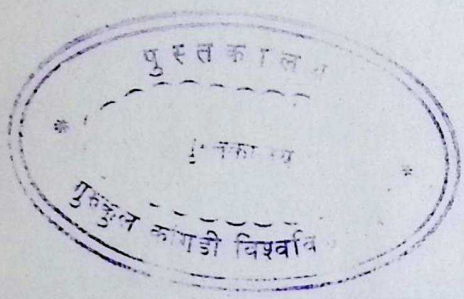

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Preface

The main aim of all the archaeological diggings is to provide source material for historical reconstructions. But, the archaeology has failed so far to fulfil this objective in India, or to put it in other words, the historians of this sub-continent in general, with the exception of only a few, have been rather sceptical to use excavated material in their historical writings. Thus, the history of Kośala, Vatsa, Pañchāla, Kāśī, *etc.*, has been reconstructed almost entirely on the basis of the literary evidence, and without incorporating the excavated remains of Ayodhyā, Śrāvastī, Kauśāmbī, Ahichchhatrā, Kampilya, Rajghat, *etc.* It is probably because of the fact that the history of ancient India has been treated generally as almost synonimous with the political history, dealing with events, concerning kings and royal dynasties. The archaeological source material for this type of historical writing has been more or less limited to the coins and the epigraphs. Realising this serious lacuna of the history of ancient India, several scholars have repeatedly pleaded during the last few years that the Indian history should be rewritten, and the new attempt should be the history of the masses, and, not of the achievements of various political powers. However, a serious attempt in this direction is yet to be made. Our own observation in this regard is that the best evidence for writing the history of the people of ancient India are formed by the archaeological remains acquired by scientific excavations from various historical sites. The present dissertation is an humble attempt in this direction, and aims at discussing various patterns of life of the people of Varanasi from earliest times upto about 7th century A.D. The study is fundamentally based upon the archaeological remains, unearthed from Rajghat, from time to time.

The importance of Varanasi as a capital of the Kāśī *Mahājanapada* and a cultural centre of the Indian sub-continent is not unknown to the historians of ancient India. Several works on Varanasi and Kāśī have been published in the past. Of these, the works of M.A. Sherring, E.B. Havell, E. Greaves, and Motichandra deserve special mention. Reference may also be made to an exhaustive article by A.S. Altekar and a note by B.C. Law in his book "Tribes in Ancient India," However, except Motichandra, none has attempted to present a detailed cultural study of ancient Varanasi. But, all these learned studies, including the one by Motichandra, are almost entirely based upon literary sources. As against these, the primary source of our cultural study remains to be the excavated material from

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Rajghat, the site of ancient Varanasi. However, it must be frankly admitted that the numerous references in ancient Indian Literature to the manifold cultural attainments of Varanasi in the past had been one of the important factors for our selection of the topic for the dissertation. As far as we know, a cultural study, based on the excavated finds of any particular ancient city-site, which also figures prominently in the literature, has never been attempted earlier.

During the study, it was realised that it was rather difficult to derive relevant information for the cultural reconstructions solely from the archaeological material. In the absence of the well planned horizontal excavations, and the precise lateral context of various archaeological antiquities, the problem of interpreting the evidence became all the more difficult. Under these circumstances, we thought it desirable to seek help from the ancient Indian literature in understanding the archaeological evidence. An attempt was made to find corroboration from the contemporary literature, as far as possible. However, at times we failed to seek relevant information from the contemporary works. In such cases, necessary support was sought from the texts, composed prior to or later than the period of the antiquities under discussion. For example, the explanation of the underground structures, belonging roughly to the Gupta Period, was found in Kauṭilya's Arthaśāstra only. The early Buddhist literature, including the Jātakas, has been frequently referred to for corroboration and explanation of the archaeological evidence for Period II, ranging from C. 600 B.C. to 200 B.C., since most authorities on the Buddhist studies agree that a large bulk of this literature must have been composed within the above mentioned time bracket. It needs to be mentioned here that we have unquestioningly relied on the generally accepted opinions regarding the chronology of the ancient Indian literature.

As we did not dispute the accepted dates of the different literary works, we also unhesitatingly accepted the word of the excavators of Rajghat, in respect of the chronology of the various phases and the remains found in them. However, an attempt has been made to reorganise the different archaeological phases of the excavators, and to present a modified set of periodisation. For example, both the pre-NBP and the NBP phases formed parts of the Period I in the excavation report of Rajghat, but the separation of the two into different periods appeared more logical to us. We desired to finish our study around 600 A.D., but it had to be continued upto 700 A.D., since the Period IV of the excavators continued upto this date and there was no way to further demarcate the period upto 5th or 6th Cent. A.D.

As various strata of the subsequent periods were found badly disturbed in most of the trenches at Rajghat, it was not considered desirable to incorporate them in the present dissertation. Moreover, the available evidence clearly suggests that ancient Varanasi had already reached the zenith of its growth by the Gupta Period, and thus, the main objective of the present study—to trace the gradual

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development of this township was more or less fulfilled by concluding it at this stage. Although we accepted the view of excavators in the matters of chronology of the site, we did not hesitate to differ from their interpretations on several occasions. We would like to put on record that we were greatly emboldened to do so, after our meeting with our esteemed teacher Prof. A.K. Narain, Director of the Rajghat excavations, who very kindly and also sportingly permitted us to express our views boldly, even if they differed widely from the published report.

The entire thesis has been divided into ten Chapters. The Chapter I is an exhaustive introduction to the subsequent study, and deals with the physical features of Varanasi and its surroundings, its brief political and cultural history, history of the archaeological work at Rajghat, and the methodology adopted in the dissertation. From the Chapter II onwards begins the study of various aspects of life of the people of ancient Varanasi. Thus, Chapter II is devoted to the study of town planning and the building activities. It is worthwhile to note here that a very limited number of structures belonging to the Periods III and IV were exposed during the excavations carried out by our department upto the year 1969. The evidence for the building activities was so meagre that we found it very difficult to discuss in detail the structural features of various periods. Under the circumstances. we decided to concentrate on one particular area close to the river Ganga for further digging. The entire area selected by us for the operations was already robbed of its upper layers, during the railway diggings of 1940. The small scale excavation conducted by us during the session 1977-78, under the general supervision of Prof. K.K. Sinha proved more than a success and brought to notice the existence of several house complexes, roads, lanes, private and public drains, and several underground structures of varying dimensions and depth. The entire evidence have been incorporated in the Chapter II, and these new structures have naturally received a comparatively detailed treatment, since they obviously did not find place in the published report of Rajghat. However, our discussion of this new evidence falls short of a regular report, which we propose to publish very shortly.

Chaptar III deals with the discussion of various utensils, and an attempt has been made in it to determine their probable use. The Chapters IV, V and VI are devoted to the study of dress, ornaments and coiffure respectively. Most of the information for these Chapters has been gathered from the terracotta figurines of the different periods. The succeeding chapter VII has been devoted to the study of toilet accessories, mostly based on the actual specimens obtained from the site. The food habits and the kitchen equipments form the subject matter of Chapter VIII. The study is primarily based upon the interpretation of the different archaeological antiquities. An attempt has been made in the Chapter IX to discuss in detail the economic life of the people of Varanasi during different periods, as

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reflected by the archaeological remains unearthed from Rajghat. With a view to giving a comprehensive picture, help has also been sought from the various literary references, as corroborating and supplementing evidence to the information, gathered from the archaeological sources. The last Chapter is that of conclusion, in which we have tried to give an integrated account of the cultural attainments of Varanasi through the ages. It is in this Chapter that an attempt has been made to trace the gradual development of Varanasi into an urban centre, and to discuss the factors, which were presumably responsible for the growth of the township from time to time. It was realised at this stage that no account of the history of Varanasi would be complete without referring to its achievements in the religious spheres. Since the archaeological evidence for the religious life of the people of Varanasi was not found sufficient for a full Chapter, the same has been briefly incorporated in the last chapter of conclusion.

It is our privilege to put on record our sincere gratitude to all those persons who have variously contributed to the complet n of the work. First of all, we wish to express our gratitude to our esteemed teacher, Prof. K.K. Sinha, who not only supervised the dissertation, but also extended several facilities like providing necessary funds for our excavation at Rajghat in the year 1977-78. Prof. J.N. Tiwari and Dr. P.C. Pant, Reader in the Department, have taken keen interest in the progress of our work. They unhesitatingly offered all the possible help, encouragement and suggestions, whenever approached. The latter not only suggested the topic of this dissertation to me, but also undertook the arduous work of going through almost the entire work. My sense of gratitude to them can hardly be expressed in words. Thanks are also owed to Dr. (Miss.) Vidula Jayaswal, Lecturer in our department, for her help and suggestions in the preparation of this work. Thanks are also extended to Dr. Kalyan Krishna, Lecturer in the department of History of Arts, for his help in the preparation of the bibliography.

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No words can express my feeling of indebtness to Shri Jai Ram Singh, S.T.A., Department of A.I.H.C. and Archaeology, Shri Jaya Shankar Misra, Lecturer, Faculty of Fine Arts, and Shri Kamakhya Prasad Singh, who is now in the U.P. Degree College, Varanasi, for the preparation of all the line illustration presented in the work. My friend Shri Jaya Shankar Misra prepared almost all the line illustration for the Chapters IV, V and VI, and the remaining were prepared by my friend Shri Jai Ram Singh. Besides, the latter also did the painstaking job in arranging the plates, stencilling them and other multifarious work connected with the illustration.

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I also place on record my thanks to Shri B.D. Madhur S.T.A. of our department, for preparing some of the line illustrations of Chapter IV and for inking most of the pencil line drawings prepared by Shri Jaya Shankar Misra. Thanks are also due to Shri O.P. Khaneja, S.T.A., Department of A.I.H.C. and Archaeology for providing some of the photographs of the structural remains of the work done during the year 1977-78, and to Shri Ram Chandra Singh of the Bharat Kala Bhavan who photographed the small antiquities. I am also greatly indebted to Shri S.C. Ghildiyal, Librarian of the Indology Library, for promptly arranging the necessary books required for the work.

Thanks are also due to Shri O.P. Tandon, Officer on Special duty in the Banaras Hindu University and the Dy. Director, Bharat Kala Bhavan, and to Shri S.K. Srivastava, Lecturer, Department of Museology, for an easy access to the reserve collection of Rajghat material housed in the Kala Bhavan.

We also wish to extend our thanks to Shri Lalta Misra. S.T.A of our Department, for various help and to Shri Bhupendra Pal Singh for making us available the chart of animal remains. Our thanks are also due to Shri Subas Rai, a research scholar in the department, for correcting type mistakes in the final draft. We also extend our thanks to Shri D.N. Sarkar and Shri Shyamji for neatly typing the hand-written manuscript within very limited time. We would rather refrain from observing the formality of thanking my wife, Manju, for all sorts of help and bearing the entire burden of the family for almost a year.

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List of Abbreviations

AI	—Ancient India.
Abhi	—Abhigyān Śākuntalam.
ARASI	—Annual Report of Archaeological Survey of India.
BDAIHCA	—Bulletin of the Department of Ancient Indian History Culture and Archaeology.
BDCRI	—Bulletin of the Deccan College Research Institute.
BIAS	—Bulletin of the Indian Archaeological Society.
IAR	—Indian Archaelogy—A Review.
ICAR	—Indian Council of Agricultural Research.
JBBRAS	—Journal of the Bombay Branch of the Royal Asiatic Society.
JBORS	—Journal of the Bihar and Orissa Research Society.
JNSI	—The Journal of the Numismatic Society of India.
JUPHS	—The Journal of the United Provinces Historical Society.
Kum	—Kumārasaṁbhavaṃ.
Mal	—Mālavikāgnimitram.
MASI	—Memoirs of the Archaeological Survey of India.
NPP	—Nāgarī Prachāriṇī Patrikā.
PHAI	—Political History of Ancient India.
Raghu	—Raghuvaṁśa.
Ṛitu	—Ṛitusaṁhāra.
Sam	—Saṁvata Vikrama.
SBE	—Sacred Books of the East.
Uttara Megha	—Meghdūta, Second part.

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Transliteration Table

अ = a
आ = ā
इ = i
ई = ī
उ = u
ऊ = ū
ऋ = ṛi
ए = e
ऐ = ai
ओ = o
औ = au
अं = ṁ
क = ka
ख = kha
ग = ga
घ = gha
ङ = ṅa
च = cha
छ = chha
ज = ja
झ = jha
ञ = ña
ट = ṭa
ठ = ṭha
ड = ḍa
ढ = ḍha
ण = ṇa
त = ta
थ = tha
द = da
ध = dha
न = na
प = pa
फ = pha
ब = ba
भ = bha
म = ma
य = ya
र = ra
ल = la
व = va
श = śa
ष = ṣa
स = sa
ह = ha
क्ष = kṣ

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1

Introduction

If literary evidence, are to be given due credence, Varanasi can claim to be probably one of the oldest cities in the world, as attested to by a few references to it in the vedic literature.[1] Though it lost its political importance rather early, it continued to be one of the most significant cultural centres throughout the history of India, a position which it still enjoys to a very great extent. The present work aims at discussing the cultural attainments of Ancient Varanasi from the beginning of its history upto Circa 700 A.D., as revealed by the archaeological sources. Before we take up the various aspects of cultural life of Varanasi for discussion, it is worthwhile to give an outline of its geographical and geological features, history of archaeological research, the site and its identification, political history and nomenclature of Varanasi, as a background to the subsequent study. Besides, an attempt has also been made in the later part of this Chapter to discuss the nature and limitations of the source material and methodology adopted in the dissertation.

I. Geographical and geological features

Situated on the left bank of the Ganga, Varanasi lies almost in the south-east corner of Uttar Pradesh. It is located at Long. 83° 1′ 30″ E, Lat. 25° 4′ 39″ N. The city occupies almost a central position in the Ganga valley. The present district is comprised of four tehsils, *viz.*, Banaras, Chandauli, Chakia and Bhadhohi.[2]

The common rocks found in the area are different kinds of quartzites and sandstones belonging to the Vindhyan system. Among the mineral products, reh is important from which soda ash is extracted and used in the glass industry. The nearby vindhan tract has been a perennial source of sand and stone for building and other purposes.[3] The vicinity of the river Son consists of slates, sandstones,

1. Altekar, A.S., 'History of Benaras', *The Journal of the Benares Hindu University*. Vol. I, No. 1 (1937), p. 47.
2. *Uttar Pradesh District Gazetteer*, Varanasi, (1965), pp. 13-14.
3. *Ibid.*

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quartzites, limestones, basic volcanic rocks and hematitic jaspers.[1] The alluvial soil brought by the Ganga and its tributaries consists of mostly inter-bedded layers of sand, silt and clay, and is useful in manufacturing bricks, earthen utensils, *etc.*[2] This alluvium has always been famous for its fertility.

A big part of the present day city of Varanasi is situated on a high ridge of *Kaṅkar* for a distance of about four kilometers, being fairly above the normal flood level of the Ganga and the Varuna, the latter being a tributary of the former and flowing from the north-west to the south-east in the northern part of the township. The highest level is reached in the north-east at Rajghat at a height of about 275 ft. above the mean sea level.[3] As is the case with almost all the present day urban centres, natural vegetation in and around Varanasi is hardly visible. The nearest natural forest at present is situated in the uncultivated hilly tracts of Chakia tehsil although it has been retained in small patches in the remaining tehsils also. The vegetation generally shares the common characteristics of the flora of the Ganga plains. Similar is the case with the fauna of the region. The average annual rainfall is around 1000 *mm.* and the temperature being about 30°F.

II. History of archaeological research

The accidental discovery of the archaeological site at Rajghat, believed to be the remains of the ancient capital of Kāśī *Janapada*, marks the begining of the archaeological researches in Varanasi, though some stone sculptures of considerable iconographical importance were also found earlier in different parts of the city.[4] The site was brought to light in 1940 by the East Indian Railways, while digging spoil earth in connection with the remodelling of the present Kāśī railway station. A large number of antiquities was unearthed during the dig, revealing the archaeological potentiality of the site. Considering the importance of this vast ancient habitation, the Archaeological Survey of India selected a portion of the Rajghat mound for a small scale excavation under Krishna Deva during Oct.-Nov., 1940. A detailed report of this excavation was never published except a brief note by the excavator.[5] A resume of the results of Krishna Deva's excavation is mentioned hereunder.

The excavations yielded archaeological material ranging from the Maurya to the Gāhaḍvāla period. (pl. I A, B, II. A, B,) Krishna Deva recorded "five strata

1. *Ibid.*
2. *Ibid.*
3. Singh, R.L., Banaras, *A study in Urban Geography*, Banaras (1955), pp. 14-18.
4. Sherring, M.A., *Benaras The Sacred City of the Hindus*, Delhi, (Reprinted 1975), pp. 292 ff.
5. Deva Krishna, Excavations at Rajghat Near Benares, *Annual Bibliography of Indian History and Indology*, Vol. III, (For 1940) pp. 41-51.

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of structural remains numbered I to V from top to bottom with a continuous sequence." Of these the topmost stratum is assigned to the Gāhaḍvāla period, the second to the late Gupta, the third to the main Gupta age, the fourth to the Kushāṇa and the early Gupta period and the fifth to the time of the Śuṅgas and the Mauryas. According to the excavator strata II and III provided very scanty information due to destruction by the railway digging. He recorded eight brick structures "laid out in blocks which are separated by lanes and alleys" in stratum IV. The central one of these had a complete plan and was identified by him as a temple. Other important building activity coeval with this temple consisted of a hall with five walls, "a house containing a lime plastered rectangular bathing tank, and another house with an extensive paved court at 17 feet below surface, on which were found fragments of an exquisitely ornamented pottery Kalaśa, besides hundreds of clay sealings."

Among other important finds mention may be made of a sealing of king Dhanadeva and those bearing the representations of Greek gods and goddesses, *viz.*, Nike, Apollo, Pallas and Heracles which are akin to the devices occurring on the Greek, Roman and Indo Greek coins.

Present work

The archaeological material brought to light by the railway digging and that revealed by the subsequent operation of Krishna Deva were sufficient to prove high potentialities of this site of ancient Varanasi. Accordingly the Banaras Hindu University under A.K. Narain decided to excavate at this place with a view to finding out, "the culture sequence of the site with reference to well-known literary background of Varanasi."[1]

The work was taken up on all the three mounds : nos. '1' '2' and '3' of Rajghat. The excavation at mound '1' revealed a long and continuous occupation, starting from Cir. 8th Cent B.C. to about 17th Cent A.D. and spread over six successive cultural periods, while the mound '2' revealed only two periods with a clear break between them.[2] A comparative study of the excavated materials of mound '1' and '2' clearly suggests a close similarity in the cultural equipments, including the ceramic industries of all the three phases of the Period I at both the sites with the exception of a few new ceramic forms at the latter site (*i.e.*, mound '2'). After the settlement of about 600 years (*i.e.*, Period I) the mound 2 was abandoned for a considerably long time and was reoccupied only during the late medieval times. The excavation conducted at mound no. '3' suggests that the habitation at this site was comparatively of a shorter span of only 400 years and

1. Narain, A.K., and Roy, T.N., *Excavations at Rajghat*, Pt. I., (1976), p. 19.
2. *IAR*, 1967-68, pp. 48-49.

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consisted of only the early and late phases of the NBP were period (*i.e.*, the sub-periods 1B and 1C).

The four periods of the culture sequence as proposed by the excavators, along with their main characteristic features are mentioned hereunder[1]. Since the present study is confined to the period from C. 8th cent B.C. upto the 700 A.D., the material remains of the succeeding periods obviously do not find mention in the present work.

Period I It is further divided into three sub-periods *viz.*, 1A, 1B and 1C on the basis of ceramic industries and other cultural equipments. The period as a whole covers a span of nearly 600 years (from Circa 800 B.C. to 200 B.C.), each sub-period continuing for a period of 200 years.

Sub-period 1A (c. 800 B.C. to c. 600 B.C.)

It represents the culture of the earliest inhabitants of this site. They used iron implements, bone, tools, earthen utensils of black slipped ware (both plain and painted), black-and-red pottery (both plain and painted) and slipped and unslipped red ware. The other important finds of the sub-period are pottery discs, wheels, terracotta and stone balls, ear-ornaments, skin rubbers and stoppers. There is also evidence for the cultivation of rice.

Sub-period IB (c. 600 B.C. to c. 400 B.C.)

This is essentially a continuation of the preceding phase and marks the advent of the famous NBP ware. All the preceding ceramic industries and other cultural equipments continued comparatively in a greater frequency. Most important to note is the construction of a clay embankment as a measure against floods.

Sub-period 1C (c.400 B.C. to c. 200 B.C.)

This sub-period is characterised by the gradual coarsening of the ceramic industries, particularly the NBP ware. The coarse grey ware appears to dominate. The pear-shaped vase with a few variants, *Kaṛāhī*, carinated *hāṇḍī* and shallow bowls with flat base strike a new note in the pottery assemblage. Black-and-red ware is almost negligible. Among structural activities of the sub-period, mention may be made of a mud wall, a mud flooring and terracotta ring-wells.

Period II (c. 200 B.C. to the beginning of the Christian era)

There are two structural sub-periods in it. The people of this age used only red ware vessels and the characteristic potteries of the preceding period ceased to exist. Seals and sealings, and use of burnt bricks in structures were important innovations during this period. There is also evidence for complete or partial

1. For details see, Narain and Roy, *op. cit.*, (1976), pp. 22, ff. also *IAR* 60-61, pp. 35-39, 1961-62, pp. 57-58, 1962-63, pp. 41-42, 1963-64, pp. 58-59, 1964-65, pp. 44-45, 1965-66, pp. 54-55.

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houseplans, sanitary arrangements made either by placing soakage jars with perforated bottoms or soakpits made of terracotta rings, drainage system and *paccā* brick-lined wells. Stone pounders appear for the first time in this period. It is also characterised by some typical Śuṅga terracotta human figures.

Period III (from the beginning of the Christian era to the end of third Century A.D.)

Three structural phases were noted by the excavators. The female clay models of this age offer an opportunity for a detailed study of dress and jewellary. Most important to note is the use of the 'open kiln' as against the closed one. Among the important wares, the Red Polished and Rouletted potteries need special mention, the distinguished type noted in the former being the sprinklers. Besides these, nearly four hundred seals and sealings were recovered, those bearing the name *Hariṣeṇa* being the most common. One Kauśāmbī and one Ayodhyā coin, bearing the legends *Śivadatasa* and *Navasa* respectively, are the other important finds of this age. The terracotta figurines. seals, sealings and some other objects clearly demonstrate foreign influence on the city life. This was probably the most prosperous period in the history of this site.

Period IV (c. 300-700 A.D.)

Besides the various buildings, the most important feature of the city during this period appear to be the underground structures of varying dimensions. The terracotta human figurines of this age show a variety of coiffures, drapery and ornaments.

Among the noteworthy finds of the period are four gold coins of the Gupta Kings Chandra Gupta, Kumara Gupta I and Skanda Gupta.

III *The site and its identification*

The site of ancient Varanasi is located towards the north-east of the city in a place known as Rajghat. Situated on the confluence of the Ganga and the Varuna, this extensive site containing a series of mounds of different dimensions, bears numerous traces of ancient habitations. There are in fact three blocks of mounds designated as mounds '1' '2' and '3' by the excavators of the site (fig. A.). Mound '1' is bounded on the south-east by the Ganga, on the north and north-east by the Varuna and towards the west and north west by a steep depression, which is sometimes referred to as a moat (?). This is the main and the biggest mound and rises at places to a height of about 15 metres from the present ground level[1].

Mound '2' is situated in a locality, presently known as Sarai Mohana, and is located on the left bank of the river Varuna, about 0.33*Km*. from Rajghat. It

1. Narain and Roy, *op. cit.*, (1976), p. 17.

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covers "an area of approximately 1 square *Km.* and "extends more towards north-north-east from the confluence of the Ganga and Barna."[1]

Mound '3' is located on the north-west beyond the moat (see fig. A) within the locality of Rajghat itself. It is comparatively a smaller mound.

It is fairly well established now that the Rajghat mounds represent the remains of the ancient city of Varanasi. Amongst the early scholars, Sherring[2] was the first to point out that the old city of Varanasi stood towards north possibly on both the sides of the river Varuna, where it joins the Ganga. He also brought to notice many archaeological remains mostly situated towards the northern side. But, for want of proper archaeological evidence, the significance of the suggestion was not fully realised till the accidental discovery of the site and Krishna Deva's subsequent operations on it. In this connection the discovery of a seal from Rajghat[3], inscribed in Gupta character with the legend *Barāṇasy—ādhishṭhān—ādhikaraṇasya* meaning 'the seal' of the city administration of Varanasi is significant, as it has proved beyond doubt that the mounds discovered at Rajghat in fact represent the site of ancient Varanasi. There is yet another sealing[4] of the same period reading "*Vārāṇasy āraṇyaka Śreṇi*" meaning "the guild of the foresters of Varanasi," which further confirms the above suggestion.

IV. Political History

The political history of Pre-Buddhist India is shrouded in mystery and Varanasi does not form an exception to it. However, the Purāṇas do contain some interesting historical information about the various kingdoms of the remote past including that of kāśī. But the Purāṇic accounts are generally regarded by historians as less authentic, since they are said to be full of myths and legends. At the same time, these cannot be altogether ignored, "as they very often contain a sub-stratum of truth."[5]

The traditional history as contained in the Purāṇas indicates that the earliest dynasty which ruled in Varanasi traced its descent direct from Manu.[6] Kṣatravṛiddha, the great grand son of Manu (the son of Ayu, the Aila King of Pratiṣṭhāna), was the first king of Varanasi.[7] The seventh king in the line was Kāśa, after whom

1. *Ibid.*, p. 19.
2. Sherring, M.A., *op. cit.*, pp. 292-312, 324-326.
3. Deva, Krishna, 'Excavations at Rajghat Near Benares,' *op. cit.*, pp. 41, ff.
4. *Ibid.*
5. Law, B.C., *Tribes in Ancient India*, (1943), Preface.
6. *The Vedic Age*, Vol. I, (1965), p. 277, Manu is said to be the originator of the human race and all the dynasties mentioned in the Purāṇas sprang from him.
7. *Vedic Age op. cit.*, (1965), p. 277.

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the kingdom came to be known as Kāśī.[1] Dhanvantari was another king in this line who came after a few generations. He was followed by Ketuvanta I and Bhīmaratha one after the other. The next king was Divodāsa I, the great grand son of Dhanvantari, and is credited in the Purāṇas with the victory over the Haihayas of Chedi whose capital was Māhiṣmatī. Haihaya king Bhadrasyena was killed along with all his sons except Durdama who is said to have been spared due to his tender age.[2] Divodāsa's successor was Aṣṭaratha but his reign was rather uneventful. It is only during the reign of the next king Haryaśva that war flared up again. The Haihaya king Durdama regained the lost prestige of his family by defeating the Kāśī king. His son Sudeva also met the same fate. Sudeva's son Divodāsa II was harassed by Haihayas and he founded a new Varanasi. But even this shifting of place could not save the situation, and the Haihaya king Vītahavya attacked and defeated Divodāsa. He took shelter at the *āśrama* of the sage Bhāradvāja in a forest, where he was blessed that his son would kill thousands of Vītahavyas. His son and successor Pratardana defeated the Haihayas, their king Vītahavya losing all his hundred sons in the battle and saving his own life only by changing his caste to that of Brāhmaṇa with the permission of the *ṛiṣi*" Bhṛigu.[3] The Purāṇas refer to many kings who followed Pratardana, but mention no particular achievement of any one of them. The dynasty came to an end about 12 to 15 generations before the Mahābhārata War.

The emergence of the Bārhadratha dynasty in Magadha at this time politically eclipsed the power of the Kāśī kingdom. Varanasi perhaps suffered a setback at the hands of Magadhan king Jarāsandha, but after his fall, soon became independent. Perhaps due to this hostility, the kings of Kāśī sided with the Pāṇḍavas in the Mahābhārata War.[4] Neither these events can be supported by any other source nor can be assigned even tentative dates.

After the Mahābhārata war, Varanasi was ruled by the kings of Brahmadatta's line for a long time prior to the Buddha's period. The political history of Varanasi

1. There are some more suggestions in connection with the origin of Kāśī. The word Kāśa is mentioned in the Ṛigveda which denotes a species of grass named *Saccharum spontaneum*. It has been suggested elsewhere that the name Kāśī might have been derived from this grass, abundant in the region. Macdonell and Keith, *Vedic Index*, Vol. I, p. 153. also M. Monier Williams, Sanskrit English Dictionary, (1956) p. 280. Alternatively, the name has also been connected with the word 'Kāśi' which means 'Shines' and Kāśī is thus interpreted as "one that illuminates the soul' (*Kāśī Khaṇḍa* XXVI-67). There is yet another suggestion according to which in the later vedic period territories were named after the people inhabiting them and therefore, it is not unlikely that a tribe called Kāśī might have given its name to this region. Varanasi in ancient times, *Introducting Varanasi*, Editors, Narain, A.K., and Gopal Lallanji, A Souvenir XXXI session of Indian History, Varanasi, (1969) p. 10.
2. Altekar, A S., *op. cit.*, (1937), pp. 47, ff.
3. *The Vedic Age*, p. 283.
4. Narain and Gopal, *op. cit.*, (1969), p. 12.

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starts on firmer ground from the time of the Buddha. The available sources indicate that the kings of Kāśī and Kośala were engaged in a long struggle for political supremacy. Kāśī and Kośala were close neighbours and the boundaries of these kingdoms were common. These two were often paired in early literature as Kāśī-Kośala.[1]

The conflicts between Kāśī and Kośala have been referred to in the *Mahāvagga* and the Jātakas.[2] Altekar[3] thinks that all these events happened sometime in the 7th or 8th century B.C. Probably Kāśī had an upper hand in the beginning, as is evident from the testimony of the Brahāchatta-Jātaka[4] that a king of Varanasi conquered Kośala and captured its capital Śrāvastī. The Kośala king was also made prisoner. The Mahāvagga, Kośambī-Jātaka, Kuṇāla-Jātaka and Sona-Nanda-Jātaka also refer to the victories of Kāśī kings over Kośala.[5] However, the success did not favour Kāśī all time, and the Kośala avenged its defeat soon. The victory over Kāśī by Kośāla kings is attested to by Mahāsīlava,[6] Ghata[7] and other Jātakas. It appears that the final blow to Kāśī was given by Kaṃsa[8] who has been described as Bārānasiggaho, *i.e.*, the seizer of Varanasi.

Although the reasons for these struggles are not known, it is apparent that Kāśī finally collapsed in the constant struggle with Kośala and was absorbed in the latter in the early 6th century B.C.[9] The conquest of Kāśī made Kośala a paramount power in north India. Its supermacy can be judged from the fact that it played an important role in the subversion of the Videhan monarchy.[10] The absorption of Kāśī into Kośala kingdom was further confirmed during Mahākośala's time in the 6th century B.C.,[11] when he married his daughter Kosaladevi to king Bimbisāra of Magadha and conferred upon her a village of Kasi (*Kāsigāma*) as bath money. After Bimbisāra's murder by his son Ajātśatru, his Kośalan wife soon died in grief. This naturally led her brother Prasenjit, a contemporary of the Buddha, to declare war against the Magadhan king for the resumption of the

1. *The Vedic Age*, p. 326.
2. Raychaudhuri, Hemchandra, *PHAI*, (7th ed., 1972), p. 137.
3. Altekar, A.S., *op. cit.*, (1937), pp. 59-60.
4. Cowell, Jātaka no. 336.
5. Raychaudhuri, H.C., *op. cit.*, p. 137.
6. Cowell, Jātaka no. 51.
7. *Ibid.*, Jātaka no. 355.
8. Malalasekere, *Dictionary of Pālī Proper Names*, Vol. 1, pp. 695-700. also Cowell, Jātaka Nos. 282 and 521.
9. Altekar, A.S., *op. cit.*, (1937), pp. 59-60.
10. Raychaudhuri, H.C., *op. cit.*, p. 87.
11. Law B.C., *op. cit.*, (1943), p. 109, Upadhya, Bharat Singh *Buddhakālīn Bhārtīya Bhūgol* (Hindi), p. 234. Motichanḍra, *Kāśī Kā Itihāsa* (Hindi), (1962), p. 29 also Raychaudhuri H.C., *op. cit.*, p. 138.

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Kāsīgāma.[1] In the beginning Ajātaśatru was successful, but Prasenjit was the victor at the end. The latter not only set free the imprisoned king Ajātāśatru but also gave his daughter Vajīrā in marriage to him along with the disputed Kāśī village as her pin-money. The Kośala power now declined and even after the death of princess Vājīrā, Varanasi (Kāsīgāma) continued to form a part of the Magadha empire. In course of time the entire kingdom of Kāśī became an integral part of the Magadha.[2]

When the last king of the line of Bimbisāra proved unworthy, Śiśunāga, the Magadhan viceroy of Kāśī, was invited to become the king of Magadha, according to the Buddhist sources. The Purāṇas state that he posted his son in charge of Varanasi and brought all the important states in north India under his sway.[3]

The Nandas, who succeeded Śiśunāgas, extended their empire upto Punjab and also wrested control over Kāśī.[4] The Mauryas next held sway over it and it was in the time of Aśoka that Sarnath, the famous Buddhist centre, situated near Varanasi received special attention. This is confirmed by several archaeological remains unearthed at Sarnath, including Aśoka's Dharmarājikā stupa and his famous lion pillar. However, there is hardly any literary or archaeological evidence to suggest Aśoka's interest in the township of Varanasi.

The Śuṅgas and Kāṇvas succeeded the Mauryas one after the other and evidently also ruled over Varanasi. According to Motichandra,[5] Phālgunimitra and Jeṭhadata referred to in the sealings found at Rajghat in the script of about 1st century B.C. were in fact the local rulers of Kauśāmbī and Varanasi. However, the suggestion requires further investigation before it may be accepted. It is held that the Śuṅga king Puṣyamitra faced a Greek invasion led by Demetrius or Menander. If the statement of *Yugapurāṇa*[6] that the Greeks overran Sāketa, Pāñchāla and Mathurā and reached Pāṭliputra is given due credence, Varanasi must have been under the Greek influence at least for some time. The discovery of a few sealings representing Greek gods, goddesses, royal heads and busts in imitation of the Greek, Roman and Indo-Bactrian coin types[7] at this place suggests, according to Motichandra,[8] a short stay of Demetrius or Menander's

1. Altekar, A.S., *op. cit.*, (1937), p. 60.
2. Altekar, A.S., *op. cit.*, (1937), pp. 63-64.
3. *The Age of Imperial Unity*, pp. 29-30; Raychaudhuri, H.C. *op. cit.*, p. 193, also Sastri, K.A.N. *Age of the Nandas and Mauryas*, (1952), p. 17.
4. Altekar, A.S. *op. cit.*, (1937), pp. 63-64.
5. Motichandra, *op. cit.*, (1962), p. 59.
6. *A Comprehensive History of India*, Vol. II, (1957), p. 95.
7. Krishna Deva, 'Coin Devices on Rajghat Seals,' *JNSI*, Vol. III, (Reprint 1973), pp. 73-77.
8. Motichandra, *op. cit.*, (1962), pp. 55-58.

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army in Varanasi on way to Pāṭliputra.[1]

The Śuṅgas were succeeded by the Kāṇvas who ruled for a short period of about 45 years, *i.e.*, from Circa 75 B.C. to 30 B.C. After the fall of the Kāṇvas, Varanasi came under the political subordination of Kauśāmī. The inscription, added to the Aśokan pillar of Sarnath later informs that king Aśvaghoṣa[2] ruled over Varanasi upto his 40th regnal year. A sealing found from Rajghat[3] bearing the legend *Aśvaghoṣasya* also seems to support it. Altekar[4] refers to a king of Kauśāmbī with *ghoṣa*-ending name who may be identified with Aśvaghoṣa one of the successors of Vavaghoṣa at Kauśāmbī.

The Kushāṇa empire certainly included Varanasi. Two inscriptions discovered near Sarnath indicate that Varanasi had passed under their rule. The Sarnath Buddhist image inscription, dated in the third regnal year of Kaniṣka, records the installation of the Bodhisattava image by Bala (a monk from Mathura) at Varanasi by Mahākṣatrapa Kharapallana and Kṣatrapa Vanaspara (both of foreign extraction). Both were appointed as the deputies to look after eastern part of Kaniṣka's empire.[5]

Towards the last quarter of the 2nd or the begnning of the 3rd century A.D. Kushāṇas lost their hold over Varanasi. With the gradual crumbling of the empire, many tribal republics and monarchical families grew up in parts of Northern India, *viz.*, the Ārjunāyanas, the Mālavas, the Yaudheyas, the Nāga Kingdom, and the monarchies of Ahichchhatrā and Kauśāmbī. Here added attention may be given to Kauśāmbī, as Varanasi was under its control between the decline of the Kushāṇas and the rise of the and Guptas.

On the basis of numismatic and epigraphical evidence, Motichandra[6] suggested that Kauśāmbī was ruled by the Maghas[7] kings in the second or third century A.D. He discussed the subject at length and opined that Varanasi was also under

1. In view of the recent discovery of an inscription on the pedestal of a Śiva liṅga in Fatehpur district, referring to the Indo-greek king Menander, it may probably be held that this Greek conqueror was Menander and not Demetrius.
2. Motichandra, *op. cit.*, (1962), p. 66.
3. Motichandra, *op. cit.*, (1962), p. 66. also Agrawala, V.S., 'Clay Sealings from Rajghat', *JNSI*, XXIII, pp. 412-413.
4. Altekar, A.S., 'New kings and Interesting Coin-Types from Kauśāmbī,' *JNSI*, Vol. IV, (reprint 1973), pp. 3-4. also *A Comprehensive History of India*, Vol. II, (1957), pp. 107-8.
5. *A Comprehensive History of India*, Vol. II, pp. 240-272.
6. Motichandra, *op. cit.*, (1962), pp. 68-73.
7. Maghas the founder of this new dynasty might have been lieutenant of the Kuṣāṇas and was a subordinate of the Kushāṇas, *The Age of Imperial Unity*, (1968) pp. 175-176. Bhandārkar suggested that Magha was an Avestan name. Agrawala informed that in the Kaśyapa Buddha image inscription from Mathurā the name Devaputra Magha occurred. (Agrawala, V.S., *JNSI*. XXIII, p. 411).

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the political subordination of Kauśāmbī during the third century A.D. He strengthened his view on the ground that all the Rajghat sealings belonging to this period had connections with the kings of Kauśāmbī. In this regard particular mention may be made of the sealings of the kings. Dhandeva,[1] reading *Rājño Dhanadevasya*, Jyeṣṭhamitra[2] Abhaya, reading *Rājño Abhayasya*, Kṛiṣanasena, Bhīmasena, reading *Rājño Bhīmasenasya*, Śivamagha[3] reading *Rājña (ḥ) Kautsīputrasya Śrī Śivamaghasya*, Rudramagha,[4] reading *Mahāsenāpatisya Kudramaghasya*, Yuvarāja Magu and Maṇyāditya, reading *Ma (ā) nyāditya rājña*,[5] *etc.* The above evidence clearly goes to suggest that Varanasi has a close relation with Kauśāmbī in the second-third centuries A.D.

After the Maghas Kauśāmbī was under the possession of King Navva, who ruled in about 275 A.D. The sealing[6] and the coin[7] of this king Navva (reading *Navvasya* or *Navasa)* have also been found at Rajghat. There might have been some more kings in the dynasty, who held sway over Varanasi till the rise of the Guptas.

That the city of Varanasi formed part of the Gupta empire is well attested to by the discovery of gold coins of Chandra Gupta, Kumara Gupta I and Skanda Gupta from the regular excavations at Rajghat.[8] This supposition is amply confirmed by the discovery of several Gupta inscriptions in and around Varanasi, *viz.*, the pillar inscription of Skandagupta from Bhitari (distt. Ghazipur), the Sarnath Buddhist Image Inscription[9] of the year 154 G.E. of Kumara Gupta II, the Sarnath Buddha stone Image Inscription of the time of Buddha Gupta of the year G.E. 157. together with the pedestal Inscription on a broken image of the

1. The sealings of king Dhanadeva reading *Rājño Dhanadevasys* have been unearthed in a fairly good number at Rajghat. A few coins of the same king have also been found from Kauśāmbī which are dated roughly between the 1st century B.C. and the 4th century A.D. *The Age of Imperial Unity*, (1968), p. 175.
2. The coin of the same king is reported from Kauśāmbī also, Sharma, G.R., *Excavations at Kausambi*, 1949-50, *MASI*, no. 74 (1969), p. 19.
3. According to V.S. Agrawala, Kautsīputra Śivamagha seems to have been a brother of Kautsīputra Poṭhasiri, both being sons of Vāsiṣṭhīputra Bhīmasena of the Giñjā Inscription. Agrawala, V.S., *JNSI*, XXIII, pp. 410, ff.
4. Agrawala, V.S. *JNSI*, XXIII, pp. 410, ff. The palaeographic character of the sealing attributes it to Kusāṇa period and the king seems to be a member of the Magha family of Kauśāmbī. He used to call himself *Mahāsenapati* as the title suggests.
5. *Ibid.*, pp. 411-413. All the above mentioned sealings are referred to in his article. The author also personally studied them from the collection of the Bharat Kala Bhavan, B.H.U.
6. *Ibid.*, p. 411.
7. Narain, A.K. and Roy, T.N., *op. cit.*, (1976), p. 14.
8. Narain, A.K., and Roy, T.N., *op. cit.*, (1976), p. 14.
9. Raychaudhuri, *op. cit.*, p. 520; also Misra, Ram Swaroop, *Inscription of the Early Kings and Their Successors*, pt. I. Monograph of the Department of Ancient Indian History Culture and Archaeology, no. 6, B.H.U., (1971), p. 6.

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same year kept in the Bharat Kala Bhavan, and the Banaras[1] (Rajghat) Stone Pillar Inscription of G.E. 159 or 157 (now in the Bharat Kala Bhavan, *etc.*).

It has been suggested by Upendra Thakur that the Hūṇa King Toramāṇa conquered Kauśāmbī, Banaras and Magadha and on his return from Magadha he died at Kāśī.[2] "Vainya Gupta was encouraged by Toramāṇa to become the ruler of the eastern provinces of the Gupta empire and the latter installed Prakaṭāditya, a son of Vainya Gupta, on the throne at Kāśī."[3]

In the 6th century A.D. Yaśodharaman of Malwa dominated the whole of northern India and Kāśī seemed to have been under his suzerainty. But soon after it went under the rule of Maukharis of Kanauj.

Leaving aside legends and myths the above survey of the political history of ancient Varanasi from the age of the Buddha down to the Gupta period clearly depicts its unimpressive political career. The political power, which it lost at the time of the Buddha or a little earlier, could not be achieved again. Its miserable political condition can be easily adjudged by the fact that for a time it was tossed about between Kośala and Magadha till it was finally annexed by the latter. It remained as a part of this kingdom for a considerably long time. It was only at a later stage, possibly with the fall of the Kushāṇas, that it came under the political subordination of Kauśāmbī kings for a short period, *i.e.*, between the decline of the Kuṣhāṇas and the rise of the Guptas. But soon after the establishment of the Gupta dynasty it again formed a part of the great empire. Thus, Varanasi has no independent political history from the Buddha's time onwards.

In spite of this unimpressive political history, Kāśī was one of the sixteen *mahājanapadas* during sixth century B.C. and its capital Varanasi continued to be a great city from the earliest historical times. This may be supplemented by the references made in the Buddhist literature, where at one place Varanasi was included among the twenty large cities of the Buddhist period,[4] and at an other place it was considered among the six great cities (*mahānagarāni*)[5] by Ānanda as a suitable place for the *mahāparinirvāṇa* of the Buddha.

It earned great fame possibly due to its magnificant attainments in other fields. As we know from the Buddhist literature, Varanasi was famous for its cloth, perfumes, sandal, wood, scents, ivory works and ointments. We have also ample literary evidence to show that these were sold in the markets of different

1. Raychaudhuri, *op. cit.*, p. 522, also Misra, R.S., *op. cit.*, pp. 6-7.
2. Thakur, Upendra, *Some Aspects of Ancient Indian History and Culture*, p. 66.
3. *Ibid.*
4. Upadhyaya, Bharat Singh, *op. cit.*, p. 500.
5. *Ibid.*, pp. 11 and 500.

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corners of the country. It was connected with most of the important cities of ancient India like Taxila, Śrāvastī, Rājagṛiha Vaiśālī, Veranjā and many others even during the time of *Mahājanpadas* by land and river routes.[1] Among the various items of export to different Asian countries, according to *Mahāvastu*,[2] the plain and coloured *dukūla* of Kāśī finds an important place. Thus as gleaned from literature, Varanasi was a flourishing trade centre during Buddha's time and perhaps also afterwards.[3]

Nomenclature

Varanasi was perhaps amongst the few cities in ancient India which enjoyed the prestige of having many names, frequently referred to in the Jātakas and other literature. Though the city was also known by such names as Kāśīnagara and Kāśīpura[4] sometime, in the past, yet it flourished almost throughout its history under the name 'Varanasi' which peculiarly enough does not end in *pura*, *puri* or *nagara* to denote town or city. But similar cities whose names gave no such indication were not uncommon in ancient India, *e.g.*, Śrāvastī, Kauśāmbī, Rājagṛiha, Sāketa, Vaiśālī, Champā, Ahichchhatrā, Bhṛigukachha, *etc.*

It is not easy to account for the name of the city, as is evident from the different views associated with the origin of the name Varanasi, discussed hereunder. The *Purāṇas* state that the city extended between the Varunā and the Assī in the north and south respectively, and it was after the names of these two streams that it came to be known as Varanasi. The above information occurred in the *Vāmana*, *Padma* and *Skanda Purāṇas*[5] Cunningham,[6] Nundo Lal Dey,[7] Rhys Davids[8] and B.C. Law[9] also subscribe to this view. But there are certain objections in accepting it. First, the Assī is merely a brooklet and cannot be taken as a river; nor it is mentioned as such in any early literature.[10] Second, the extension of Varanasi

1. Motichandra, *op. cit.*, (1962), p. 48.
2. Motichandra, *Sarthavāh* (Hindi) Patna, (1966), p. 142.
3. See Motichandra, *op. cit.*, (1962), pp. 47 ff, 60-61, 81-82 where in testimony of the *Arthaśāstra*, the *Mahābhāsya*, the *Jātakas* stories, the *Mahāparinirvāṇa-sūtra*, the *Divyāvadāna*, *etc.*, have been cited.
4. Law, B.C., *Historical Geography of Ancient India*, (1967), pp. 110-112, also, Law, B.C., *op. cit.*, (1943), p. 102.
5. Singh, R.L., *op. cit.*, p. 2.
6. Alexander Cunningham, *The Ancient Geography of India*, Varanasi (1963), pp. 367.
7. Dey, N.L. *The Geographical Dictionary of Ancient and Medieval India*, Delhi (1971) pp. 23-25.
8. Rhys Davids, *Buddhist India*, (Indian edition, 1950), p. 25.
9. Law, B.C., *op. cit.*, (1967), pp. 110-112.
10. There is no mention of these two rivers in Pāli *tripiṭaka* or its *Aṭṭhakathās*. But *Mahāvastu* mentions that Varanasi was situated along the river Varunā. In Sigāla and Chakkavāka Jātaka it is referred that the Ganga was flowing very close to Varanasi. Upadhyaya, Bharat Singh, *op. cit.*, p. 372.

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upto Assī in ancient times is not proved archaeologically. The study of the contour plan[1] of Rajghat clearly suggests that mound (the site of ancient Varanasi) extended only upto the present Kāśī railway station or a little beyond it. *Matsya Purāṇa*[2] also does not agree with the above and states that the early location of the city was along the Varuṇā river towards the northern skirts of the present day city. It is in the later Purāṇic literature[3] only that the Assī is mentioned as a river presumably with a view to justifying the name Varanasi. Thus, the idea that the city is bounded by the two streams, Varuṇā and Assī appears to be of late origin when the city's population moved towards south.

The other theory envisages that the river Varaṇāvatī mentioned in the *Atharvaveda* is probably identical with the modern Varṇā[4] and Varanasi derived its name from this river. Mahābhārata[5] also mentions Varṇāvatī as a river. Macdonell and Keith[6] support this proposition and strengthen the view by arguing that the name of the town may be older than the *Janapada* itself.

Yet another theory is propounded by Motichandra,[7] according to which the city was called Varanasi because it abounded in the Varaṇā trees. Varaṇā is the name of a species of tree (*Crataeva roxburghii*), to which reference has also been made in the Atharvaveda and Brāhmaṇas.[8] It may be noted that several cities in ancient India were named after the tree names. Kauśāmbī,[9] for example, was named after Kuśāmba tree, and legend associates the tree Pāṭali with the name of the city Pāṭaliputra.[10] The names of Kolnagara[11] or Koliya nagara and Pippalīvana[12] may be cited as other examples of this ancient Indian practice. Thus, there are differing views about the origin of the name Varanasi, referred to above in brief, and each hypothesis seems to derive support from one or the other classes of ancient Indian literature. However, in view of the conflicting literary evidences, it is hardly possible to arrive at a definite conclusion in this regard. The above discussion does not conclude that Varanasi had only one name in the past. In

1. Narain and Roy, *op. cit.*, (1976), fig. 2.
2. Motichandra, *op. cit.*, (1962), p. 3.
3. *Ibid.*
4. Law, B.C., *op. cit.*, (1967), pp. 110-112.
   also Law, B.C., *op. cit.*, (1943), p. 102.
5. S. Srensen, *An Index to the Names in the Mahābhārata*, (1963), p. 709.
6. Macdonell and Keith, *Vedic Index*, vol. I, (1967), pp. 153-155.
7. Motichandra, *op. cit.*, (1962), p. 4.
8. Macdonell and Keith, *Vedic Index*, Vol. II, p. 244.
   Monier Williams, M., *Samskrit-English Dictionary*, (1956), p. 921.
9. Sharma, G.R., *op. cit.*, (1969), p. 6.
10. Altekar, A.S. & Misra, Vijayakanta, *Report on Kumrahar Excavations, 1951-1955*, Vol. III, Patna, (1959), p. 3.
11. Upadhyaya, Bharat Singh, *op. cit.*, p. 286.
12. *Ibid.*, p. 312.

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fact, according to Jātakas, it was given various appellations from time to time such as Surundhana,[1] Sudassana,[2] Ramma,[3] Pupphavati,[4] Brahmavaddhana[5] and Molini.[6] It is said that during the time of king Aśoka the capital of Kāśī was Potali.[7] It was also declared elsewhere[8] that the city would flourish under the name Ketumati.

Besides, some other names of the city like Avimukta Kṣetra, Mahāśmaśāna and Ānandavana[9] have also been mentioned in the Purāṇas. It is interesting to note that a locality near Rajghat is still known as Ānandavana, and a few seals bearing *Avimukta, Avimuktesvara Bhaṭṭāraka*[10] and *Bārānasya adhiṣṭhān-adhikaraṇasya*, all belonging to Gupta age have also been found in and around Varanasi. It is clear from the above discussion that the city was known by various names in different ages, though its original name Varanasi was retained almost throughout its history and probably also used officially as suggested by the sealings mentioned earlier. In all probability the names other than Varanasi were merely the complimentary epithets, given to the city by various people from different walks of life. This assumption is further strengthened by a reference found in Patañjali's *Mahābhāṣya*, that the traders used to call the city as Jitvāri or a profitable centre for the disposal of wares.[11]

V. Nature and limitations of the source material and methodology

The present work aims at examining the various aspects of life in ancient Varanasi. The study is primarily based upon the archaeological material recovered from the mounds of Rajghat, supposed to be the site of ancient Varanasi. It may be recalled that prior to the scientific excavation from 1957 onwards by the Banaras Hindu University, the site was excavated first by the railways and subsequently by the Archaeological Survey of India. The archaeological remains unearthed during all the three operations from the source material of the present study. However, it may be admitted that all the antiquities recovered from the first two operations were not available to the author for a first hand study, since

1. Cowell, E.B., Jātaka no. 458.
2. *Ibid.*, Jātaka nos. 525 and 460.
3. *Ibid.*, Jātaka no. 460.
4. *Ibid.*, Jātaka no. 542.
5. *Ibid.*, Jātaka nos. 532, 397.
6. *Ibid.*, Jātaka no. 442.
7. Raychaudhuri, H.C., *op. cit.*, pp. 3 and 39.
8. Raychaudhuri, H.C. *op. cit.*, p. 68, also Upadhyaya, Bharat Singh, *op. cit.*, p. 367.
9. Altekar, A.S., *Benaras Past and Present*, *Benaras*, (1943), p. 28. also Rai Krishna Das, 'Kāśī, Rajghāṭ Kī Khudāī', *NPP* year 45, vol. 3, pp. 209-214.
10. Agrawala, V.S., *JNSI*, XXIII, pp. 408-409.
11. Motichandra, *op. cit.*, (1962), p. 60.

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many of them are now housed in different museums of the country[1] and a good number of them has gone also to some private collectors. Fortunately for the author, the Bharat Kala Bhawan of the Banaras Hindu University preserves one of the best representative collections of the Rajghat antiquities and he has tried to make full use of it.

Most of the Rajghat antiquities housed in the Bharat Kala Bhawan are either terracotta figurines or seals and sealings. They were primarily obtained from the railway digging and obviously their stratigraphical position is unknown. But, taking clues from various studies, the terracotta figurines on stylistic grounds, and seals and sealings on the basis of their palaeographic features, may be assigned tentative periods.

The basic source material for the work is, however, provided by the series of excavations conducted by the Banaras Hindu University at Rajghat during 1957 to 1978. The author has not only made the first hand detailed study of this unearthed material, but he also had an opportunity to form his opinion on the basis of his personal field observations, as he actively participated in the excavations from 1962 onwards. A part of this material has already been published in different volumes of Rajghat reports. The present work includes all of it, besides some more evidence which could not find place in the published volumes of the reports. In this context particular mention may be made of the material derived from the horizontal excavations conducted by the author during the session 1977-78.

It is often realized that the excavated material seldom speaks by itself, and it is not always easy to interpret the evidence for reconstructing the cultural life. Fortunately, Varanasi was one such cultural centre which found repeated reference in ancient Indian literature. While the author does not claim to have made an exhaustive study of ancient Indian literature dealing with the cultural activities of this old township, he has often attempted to understand and interpret the archaeological evidence with the help of ancient texts to which he could easily lay his hands. This may, however, be emphasized that the use of literary evidence is rather limited in the present study, and they have been mostly utilised to interpret the archaeological evidence.

It is generally accepted on all hands that the methodology to be adopted in a particular study depends, to a great extent, upon the nature and limitations of the source material. In case of the present study the basic source is the excavated material from Rajghat, which has its own limitations. It should be borne in mind that only a small part of this extensive site was available to the investigators for

1. The Municipal Museum Allahabad, The State Museum Lucknow, The national Museum, New Delhi and the Bharat Kala Bhawan of the B.H.U. are said to be particularly famous for the Rajghat antiquities.

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excavations and that too was hardly excavated laterally. Besides, a major part of the available area was already badly disturbed by the railway diggings of 1940. Under these circumstances one can hardly expect to reconstruct a complete history of the cultural life of Varanasi with any amount of certainty. Although the study is based primarily upon archaeological sources, partly supplemented at places by literary evidence, it remains essentially a historical enquiry, and hence the author has tried to view the entire source material from a historian's point of view.

The entire work is spread over in ten chapters. Except the two, *viz.*, the introduction and the conclusion, each chapter deals with a particular aspect of life in ancient Varanasi. It may be stated that the nature of source materials differs from chapter to chapter, and it is, therefore, worthwhile to discuss here their scope and limitations along with the methodology adopted in respect of them.

Since the present work covers considerably a long span of time (from circa 800 B.C. to 7th cent. A.D.), it has been attempted in every chapter to trace the development of each aspect of life historically, as far as possible. This has necessitated certain minor modifications in the earlier division of cultural periods followed by the excavators. The revised periodization, adopted in the present work, has been briefly discussed below:

1. *Period I* : It is a settlement of the pre 6th century B.C. period. It corresponds to the Sub-period IA of Rajghat and Sarai-Mohana. It is characterised by the absence of NBP ware and the general paucity of cultural equipments.

2. *Period II* : It is assignable to a period from 6th century B.C. to 2nd century B.C. It marks the beginning and the end of the NBP ware, and hence the whole period is further subdivided into two phases, *viz.*, early and late, corresponding respectively with the sub-periods IB and IC of the excavators.

3. *Period III* : This period covers a long span of time from circa 2nd century B.C. to the end of the 3rd century A.D. and includes both period II and III of the Rajghat excavation report. It was a period of foreign influences, as is evident from the discovery of a few tokens. In imitation of the Greek, Roman and Indo-Bactrian coin types and some other finds showing Kushāṇa features. On the basis of the differences noted in the cultural assemblage and some other considerations, this period has been again sub divided into early and late phases.

4. *Period IV* : It corresponds to the Period IV of Rajghat, extending roughly from fourth century to seventh century A.D.

After 'Introduction', the second chapter is devoted to the discussions on the nature of the settlement along with the various buildings belonging to different periods. The study is based primarily upon the excavated structural remains and the building objects associated with them. It may be stated

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here that the available information regarding the housing activity is rather insufficient, mainly due to the fact that the site has not been exposed laterally, as to present a coherent picture of various periods. For similar reasons, one also feels handicapped in dealing with the town planning of ancient Varanasi. Giving due consideration to the limitations of the source material, the study includes the general features of the structural activity of each period, besides discussion of various house complexes as well as the possible functions of various rooms.

In describing a particular complex, attention has been given to the dimension of various rooms and the area covered by the house complex. On the basis of the dimension of rooms, their situation in the particular house and the other contextual evidence like, drain, well, oven, platform, *etc.*, found in association with them, an attempt has been made to determine the varied purposes the rooms might have served in the complex. Though not on very firm ground, the area covered by various house complexes may probably suggest the economic status of their occupants. The nature of antiquities found in each room or complex would have further strengthened the conclusions in this regard. But, unfortunately the efforts in this direction could not materialise, since the various strata of a big area at Rajghat were badly disturbed by the railway digging.

Besides the above, it has also been attempted to know periodwise the nature of roofing, size of doors, openings of houses and similar other features. These details have been worked out wherever, possible, entirely on the basis of evidence revealed by the excavations.

According to the excavators, burnt brick structures do not date prior to circa 2nd century B.C. at Rajghat. The excavations have brought to light a fairly good number of walls of various periods, but only a few of them reveal coherent plan. Thus, only such structural remains have been taken up for detailed study which either reveal some kind of substantial plan or may be reasonably interpreted and reconstructed. The structures indicating no adequate plan have been left out altogether. For the sake of convenience, all the structures have been numbered and referred to as such in discussions.

In the illustrations of all the structural plans, the actual remains have been shown by regular lines, while the reconstructions have been indicated by broken lines.

The third chapter on 'Utensils' aims at discussing the functions of different varieties of vessels characterising various periods. Among utensils of different materials, only earthen vessels offer an opportunity for a detailed study, since those made of metals and stones appear in a negligible proportion in all the periods. It may be mentioned here that it was found very difficult to ascertain the proper and correct use of these vessels. However, considering the limitations

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of the data and the absence of any accepted methodology with reference to the use of various utensils, their possible function has been suggested on the basis of their comparative study with the present day practices. Besides this, it was realised that the size factor might have been an important determinant for the functions of various utensils, and hence an attempt was made to study the diameter and height of utensils. But, due to the paucity of adequate material in all the periods and with reference to all the shapes, it could be applied only to a single type, *i.e.*, bowl and that too of our first two periods, ranging from circa 8th century B.C. to 2nd century B.C. In case of the remaining shapes, a majority of the preserved sherds is such that their height cannot be determined. In view of their size the two types—dishes and vases—have been broadly divided into three, *viz.*, big, medium and small and have been referred to throughout in the discussion accordingly. Such size groups were not possible in other varieties of vessels.

The fourth, fifth and sixth chapters deal with the three different aspects of life, *viz.*, dress, ornament and coiffure respectively. In the absence of any definite evidence having direct bearing upon the dresses and coiffures, reliance had to be placed on the numerous human terracotta figurines of various periods for their study in the chapters fourth and sixth. For the discussion on ornaments in the chapter fifth, besides considering the evidence of terracotta figurines, some actual specimens found in the excavations have provided the basis. The method of interpretation in the above three chapters remains almost the same, as was adopted earlier by various scholars in their cultural studies of sculptures, paintings, coins and similar other source material.[1]

A brief note may be added, however, on the limitations of terracotta figurines as a source for the study of dresses, ornaments and coiffures. The numerous studies undertaken so far by different art historians clearly indicates that the sculptural art of almost every period in ancient India was characterised by a distinct art style, and the treatment of drapery, ornaments and hair-arrangements probably formed a part of it. The regional variations within a style, if any, are generally minor in nature. Besides, the ancient Indian artist appears to be closely linked

1. The author wishes to acknowledge that he has sought much help in writing the above chapters from the works mentioned below :

1. Motichandra, *Prāchīna Bhāratīya Veśabhūṣā*, (Hindi), Prayāga, (Saṁvata 2007, Vikrama).
2. Motichandra, *Costumes Textiles Cosmetics and Coiffure in Ancient and Mediaeval India*, (ed.) Gupta, S.P., Delhi, (1973).
3. Sivaramamurti, C., *Amaravati Sculptures in the Madras Government Museum*, Bulletin of the Madras Government Museum Madras, (1956).
4. Agrawala, V.S., The Terracottas of Ahichchhatra, *Al* no. 4., (1947-1948).
5. Joshi, N.P., *Life in Ancient Uttarāpatha*, Hindu Vishvavidyalaya, Nepal Raja Sanskrit Series, BHU, Varanasi, (1967).
6. Dhavalikar, M.K., *Ajanta: A Cultural Study*, Poona, (1973).

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with the long cultural traditions, and it is quite likely that many of his depictions are the result of the traditional influences working on him. Under these circumstances, the cultural details derived from the sculptures including terracotta figurines may at the most represent the trends prevalent in a region during a particular period. In view of these considerations, the author frankly admits that his conclusions regarding the dress, ornament and coiffure cannot be stretched too far, and thus, should be treated as tentative.

The seventh chapter on 'Toilet Accessories' has been written either with the help of actual specimens or on the basis of the inferences derived from these objects. Occasional help of terracotta human figurines and other excavated remains like bathrooms has also been sought to depict this aspect of the luxurious life. Each item related to the topic has been discussed separately in the beginning of the chapter, and an attempt has been made to assimilate the entire evidence in the end.[1]

The Chapter VIII has been divided into two sections, *viz.*, (1) objects bearing on food habits and (ii) kitchen equipments. In section (i) an attempt has been made to discuss the food habits of the people during various periods. It may be frankly admitted that the basic source material for this type of study is hardly available from the Rajghat excavations. Since the direct evidence pertaining to the actual specimens of cereals was very meagre and came only from the period III, it was thought desirable to seek help from various other objects which could indirectly suggest their existence. Several animal bones bearing cut marks found in various periods may be taken as an indication of the non-vegeterian character of the diet. Similarly for determining the different modes of cooking we have relied upon the evidence provided by various earthen vessels, like carinated cooking *hāṇḍī*, *kaṛāhī*, frying pans, *etc.* Some other utensils like small to medium sized vases and dishes were probably also used for the cooking purpose, as suggested by their burnt exterior.

Section (ii) of this chapter deals with the objects related to the kitchen. The entire material associated with this aspect has been grouped into three main categories, which have been discussed in detail.

The Chapter IX is an attempt to depict the economic life of the people of Varanasi during various periods. For the sake of convenience, it has been divided into three main sections with a few sub-divisions. It may be stated here that the available archaeological data relevent to the study of economic conditions have not always been adequate, nor they all the times seem to be of direct nature. Hence

1. The author wishes to acknowledge that in writing this chapter he has sought help from Motichandra's article 'Cosmetics and Coiffure in Ancient India, published in the *Journal of Indian Textile History*, no. VI, 1961.

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our study is based on both direct and indirect evidence, which include a wide range of antiquities.

The practice of agriculture is indicated by the occurrence of cereals or their husk as well as the implements like sickle, axe, *etc.* The presence of a large number of animal bones including those of the young ones may indicate domestication of animals. The occurrence of numerous animal terracotta figurines in various levels further strengthens this supposition. The excavations at Rajghat have yielded many such antiquities from all the periods, which may lead us to infer the existence of various crafts, industries, professions and other means of livelihood of the population. There are numerous literary references to suggest that Varanasi was one of the trade centres in ancient India. The archaeological evidence from Rajghat, however, seem to corroborate the depiction only partially.

The existence of certain corporate bodies, looking after the interests of different economic groups, may be suggested on the basis of literary as well as archaeological evidence. Throughout the chapter, we have attempted to make full use of the various literary references made in the Buddhist texts in respect of crafts, industries, profession and trade of Varanasi. Many of these aspects finds corroboration in the archaeological evidence.

The last chapter is that of conclusion and is intended to present an integrated account of the life of the people of Varanasi through the ages. All the different aspects of life described separately in the preceding chapters have been assimilated together at one place and have been discussed periodwise, with a view to determining the evolutionary trends, if any, among the various culture patterns.

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2

The Town and its Structures

The present chapter aims to discuss the settlement pattern and the town planning of ancient Varanasi during the various periods. It may be stated at the outset that we have very little information about the planning of the city its lay-outs, size of settlement and arrangement of localities, *etc.* Although an extensive area was brought under excavations during the field seasons of 1957-58 and from 1960 to 65, the site was not subjected to any sort of horizontal digging. In fact most of the archaeological work was planned with a view to delimiting the extent of the ancient settlement. In contrast one is reminded of the Marshall's excavation at Taxila where Mauryan, Scythian and Kushāṇa levels were exposed horizontally, and consequently one does not feel handicapped in discussing the settlement patterns of the site during different periods. It is due to this reason that the author undertook a small scale excavation during the session 1977-78 to expose horizontally the upper levels of a part of the mound.[1] These levels confirm to the Periods III and IV of our study, which also incorporates the results of this latest excavation at the site. Besides, a number of building remains exposed during the salvage railway digging of 1940 has also been included in the present study. Although the stratigraphical context of these remains is not clearly defined, yet, by correlating the working levels, it has been possible to assign a datable bracket to atleast some of the structural remains.

The Buddhist texts inform us about the various localities meant for carpenters,[2] hunters,[3] potters,[4] smiths,[5] *etc.*, which were all situated around the ancient city of Varanasi. These villages appear to have been the '*dvāragāmas*' (*i.e.*, the sub-urban villages). Besides the above references, there is also evidence to show that some people specialising in some particular industries, live in the main city itself, as inferred by the term *Dantakārāvithi* (the ivory workers street), referred to in the Jātakas.[6]

1. The work was done under the general supervision of Prof. K.K. Sinha.
2. Cowell, Jātaka nos. 156 and 466.
3. *Ibid.*, Jātaka no. 540.
4. *Ibid.*, Jātaka no. 408.
5. *Ibid.*, Jātaka no. 387.
6. *Ibid.*, Jātaka nos. 72 and 221, also Fausböll, Vol. I, p. 320, '*dantakāravīthim.*

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It may at once be stated that it was not possible to identify the various localities mentioned in the Buddhist literature, lying either within the settlement or outside it, probably due to the obvious limitations of the excavation. However, it is interesting to note that a good number of small ancient settlements, *e.g.*, those of Chiurpura, Umdi, Murdahan, Sirsi, Machiyan, Matigaon, *etc.*,[1] have been located roughly within a radius of 12 to 22 *km.* from the Rajghat mounds. The ceramic wares (including their types) and other cultural equipments collected from the surface of these sites offer a close similarity with the material of the Period II of Rajghat. Could it then be possible to associate these village sites with those variously referred to in the Buddhist literature ? If some of these sites had been excavated, it would have been possible to connect atleast a few of them with those referred to in the texts.

As mentioned earlier the material at our disposal is not quite adequate to present a comprehensive picture of most of the aspects of the town planning. However, within the limitations of the material, an attempt is being made in the following pages to present the various activities periodwise.

Period I (c. 8th Cent. B.C. to c.6th Cent. B.C.)

This period of about two centuries did not yield any kind of structural remains, probably owing to the very limited excavated area. Alternatively it might have also been possible that these early settlers were poorly equipped and they did not build houses of durable material. Instead, they used perishable materials like wood, bamboo, thatch, *etc.*, for the construction of houses.

It is not possible to delimit precisely the extent of the settlement during this period. The data collected from the different excavated trenches do, however, indicate that the settlement of the first occupants of the site must have been much smaller than those of the subsequent periods. Thus, for example, the settlement during this period did not extend on the northern side beyond a point which is roughly 255 *m.* away from the river bank. In the subsequent period, however, the settlement seemed to have extended further north wards. It was natural for the earliest settlers to have concentrated nearer the river front than being further away from it. Smaller settlements slightly away from the Rajghat area but again close to the river front of the Varuna also existed during this period, as is indicated by the evidence from the excavation of Sarai-Mohana.

Period II (c.6th Cent.B.C. to 2c.2nd Cent. B.C.)

Early Phase:

As indicated above, there was an extension of the area of settlement during

1. S. Radhakrishnan, *A Report on Archaeological Explorations in the Varanasi District* (Unpublished M.A. Thesis), Department of Ancient Indian History, Culture and Archaeology, B.H.U., (1964), also Shukla, M S. *Archaeological Explorations in the Varanasi District*, (Unpublished M.A. Thesis), Department of Ancient Indian History, Culture and Archaeology, B.H.U., (1963).

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this period, indicating among other things a possible increase in population. It appears, the settlement began to grow rapidly during this phase, and a new locality, designated as mound no. 3 located towards the north-western side beyond the moat, was also inhabited by the people.[1]

There is hardly any evidence regarding the housing-activity of the period, as no plan of any house could be recovered from the excavations. However, one can have some idea about the nature of construction of the houses from the available fragmentary evidence. The occurrence of post-holes as well as some fragments of mud plaster with reed impressions suggests that the houses were made using wooden or bamboo screens, which were in turn plastered with mud.[2]

The floors of the houses were made of burnt clay. There is nothing to indicate the nature of roof of these houses. However, T.N. Roy[3] surmises that the wattle-cum-thatch would have been used for the purpose as a measure against heavy rain, which the Gangetic valley presumably experienced during the period. If the assumption is true the whole structure must have been very light, consisting of wooden or bamboo frame. The timber, thus, must have played an important role in the construction of houses.

Even during the late phase of this period no important change is noticed in the construction of houses. Like the preceding phase, the people continued to live in mud huts, as evidenced by the recovery of a mud wall.[4] (see fig. 2), which was found associated with a floor, made of rammed earth and potsherds. A big earthen pot, perhaps meant for storage, also lay near the wall. The association of wall with the floor and the storage pot suggests that the whole evidence formed a part of the house complex. A similar feature has been noticed in the neighbouring region as seen at Sonepur,[5] Chirand,[6] *etc.* From these we may suggest that the people belonging to both the phases of the period were living in mud huts, probably of varying sizes, though their dimensions and exact extent are not known.

Sanitary Arrangement

The sanitary arrangements during this period were marked by the use of vertical pits of different types and the *Kachchā* drains. The pits had their beginnings from the early phase of the period, while the drains were noticed to occur from the late phase.

1. Narain, A.K., and Roy, T.N., *Excavations at Rajghat*, Pt. I, Varanasi, (1976), p. 19.
2. Narain and Roy, *op. cit.*, (1976), pp. 23 and 74.
3. Roy, T.N., *A study of Northern Black Polished Ware Culture* (Unpublished Ph.D. Thesis), Varanasi, (1977), p. 170.
4. Narain and Roy, *op. cit.*, (1976), p. 48.
5. *IAR*, 1960-61, p. 5.
6. *IAR*, 1964-65, p. 7.

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The following types of vertical pits have been noticed.

(i) Simple circular pits without any lining (*i.e.*, without any terracotta rings),

(ii) Pits with only a part of the depth lined with terracotta rings.

(iii) Pits with terracotta rings throughout depth.

Of these, the unlined pits were a feature of the early phase but those with terracotta rings, as at (iii) do not occur before 400 B.C.

Out of these, the type (i) is the simplest and is represented by the pits 1 to 3, 8-13 and 14-16.[1] These were introduced by the inhabitants of the early phase of this period and were used either as privies or as soak-pits.

The pits used for the former purpose (*i.e.*, pits 14-16) were located at Mound 3. The biggest among them measures 60 *cm.* in width and 7.14 *m.* in depth. In certain cases (as in pits 15 and 16), they lie in close proximity of each other. The presence of *loṭā* shaped vessel inside the pits and greenish moss at the base suggest that these pits were used as latrines.

Those, used as soak-pits (Nos. 1-3 and 8-13) were generally less deep (the maximum depth being 4.36 *m.*) in comparison to the pits, which were presumably meant for the purposes of privies. However, their diameter marks a definite increase, which ranges between 0.73 and 1.03 *m.* The shallower pits have been packed with the waste material rather rapidly, and thus they might have had a shorter life. Similar device has been noticed also at other places notably at Taxila,[2] Kauśāmbī[3] and Śrāvastī,[4] *etc.* The pits 8-13 located in the Rajghat V have been found quite close to one another. In view of the close proximity of as many as six pits, it may probably be suggested that when the soakage capacity of one such pit was exhausted another one was dug quite close to it. Alternatively, it is possible to suggest that they might have been constructed and used all at the same time by more than one group of family.

The remaining two varieties of sanitary arrangement, *viz.*, (ii) and (iii), were introduced, according to the excavators, by the people of the late phase of this culture.[5] The device of the (ii) variety is presented by two pits, the bigger one being dug up to a depth of 7.68 *m.* An important feature noticed in the construction

1. Narain and Roy, *op. cit.*, (1976), pits 1-3, p. 40, pits 8-13, p. 53 and pits 14-16, p. 59.
2. Marshall, Taxila, Vol. I, (reprint 1975), pp. 94-95, His remark in regard to their manufacture is worth mentioning here. He says that "in order to prevent the wall caving in, the well was filled with rough pottery vessel (*loṭās*, *ghaṛās* and the like) turned up side down between which sewage could percolate and soak into earth."
3. *IAR*, 1955-56, p. 20.
4. Sinha, K.K., *Excavations at Śrāvastī*, Varanasi, (1967), p. 17. The excavator, however, does not refer to them as soak-pits.
5. Narain and Roy, *op. cit.*, (1976), p. 40, fig. 4 also Roy, T.N. *op. cit.*, (1977), pp. 177-178.

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of this variety was that the terracotta rings were placed only upto a certain depth (up to 1.83 *m.* in case of the bigger pit) and the remaining portion of the pit was left unlined. It was done presumably with a view to check percolation of sullage water into the habitation.

Popularly known as ring-wells; the type (iii) was more common at this site as is the case at many other contemporary sites of the region. The noteworthy feature of this type, is the use of the terracotta rings throughout the depth of the pits.

It looks as though most of these ring-wells were located inside the habitation area. As the limits of habitation area on either side have not been clearly defined, the possibility that some of these might have been located at the periphery of the settlement cannot be ruled out. At two places, they were found in pairs in close proximity, the intervening distance between the two being 45 *cm.* in one case (*i.e.*, pits 17 and 18 at Mound 3) and 69 *cm.* in the other (pits 25 and 26).[1]

As is now well known, ring wells had a wide distribution, extending from Shahbazgarhi in the north, Arikamedu in the south and Brahmanabad in the west to Mahasthangarh in the east.[2] But their main concentration is in the Gangetic Valley and "their spread is coterminus and to some extent co-extensive with the NBP."[3] Rairh has the distinction having the largest number on a single site.[4] Elsewhere, they have been reported from a number of sites, such as Prahladpur, Takiapar (both in Varanasi district) Sonepur, Vaiśāli, Kauśāmbī, *etc.*

There is no unanimity of opinion regarding the use of these ring wells, as they have been identified variously as soak-pits, latrines, refuse-pits, draw-wells and granaries. In fact, it is mainly the circumstantial evidence which seems to have been taken by the various investigators as the dominant factor in determining their use. The ring-wells of this period in Varanasi seem to have been used principally as-soak-pits. In a few limited cases, however, where their bottom remains unexposed, they might have been used as draw-wells.

There are different views in regard to their origin also. According to Sankalia,[5] they originated in the north, particularly in the Gangetic Valley, in the 5th-6th

1. Narain and Roy, *op. cit.*, (1976), p. 59. The report does not mention the other example. As for our knowledge goes, they are located in the cutting RGT XII A.
2. Pandey, B.M., Ring wells in Ancient India,' *BDCRI*, Silver Jubilee Volume, Poona, (1966), pp. 207, ff.
3. Sankalia, H.D., 'Houses and Habitations Through the Ages,' *BDCRI*, Vol. 20, pts. 1-4, pp. 140-163.
4. Puri, K.N., *Excavations at Rairh*, p. 15, One hundred and fifteen ring-well were brought to light by the excavator, out of these fifty five were emptied of their contents.
5. Sankalia, H.D., 'Houses and Habitation Through the Ages,' *op. cit.*, pp. 140, ff.

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Century B.C. But in his recent study of the NBP Ware culture T.N. Roy[1] has assigned a little later date, circa 300 B.C. to the beginning of ring-wells. With reference to the sanitary device of the people of the early phase of Rajghat the report also observed that "the vertical pits of this phase were without any terra-cotta rings."[2] However, the evidence contained elsewhere in the report itself clearly contradict the above observation. It is possible to cite from the report atleast two examples, where the use of terracotta rings is well attested to during the early phase. In one case the excavators have stated that "Ring-well 22 had only one terracotta ring at the top" and in an other case, they say, in the "Ring-well 27 only two rings were exposed." Moreover, in the illustrated section too, the former has been assigned to sub-period IB.[3] Thus, the above makes it abundantly clear that the terracotta rings to the pits were introduced in Varanasi by the people of the early phase and not by the late phase, as claimed by the excavators. This evidence is fully in agreement with the date suggested by Sankalia. One is likely to accept G.R. Sharma 's opinion in this connection that is a special contribution of the NBP culture.[4] According to A. Ghosh also, "Ring-wells are common at the Northern-Black polished ware levels at all sites...and must be regarded as an innovation of the early historical period."[5] In view of the above observations made by these scholars, B.M. Pandey's[6] contention that they are of foreign origin will need a revision. T.N. Roy also does not agree with the above view and traces their origin within India. He further strengthens his hypothesis by suggesting the above three varieties (i), (ii) and (iii), as their three evolutionary stages.[7] According to the available evidence, we may thus conclude that this vertical sanitary device was known in Varanasi as early as C.6th-5th Century B.C. in two forms, *viz.*, (i) simple circular pits without any lining reaching up to the depth of natural soil and (ii) The pits with only one or two terracotta rings placed at the top. Those without any lining were peculiar to this place and were comparatively more common during the early phase. According to Marshall, the device of placing a few rings at the top of the pits was meant to check the sides from collapsing. At the same time, it enabled the sullage water to percolate and soak into the natural soil. The available evidence also suggests that the inhabitants of Varanasi had the knowledge of terracotta rings even in the early phase of this period. But, it may be stated that they were not as commonly used during the early phase as in the succeeding late phase of this period.

1. Roy, T.N., *op. cit.*, (1977), p. 184.
2. Narain and Roy, *op. cit.*, (1976), p. 23.
3. *Ibid.*, p. 74, fig. 14.
4. Sharma, G.R., *Annual Bibliography of Indian Archaeology*, Vol. XVI, 1948-53, Leydien, 1958, pl. XL.
5. Ghosh, A., *The city in Early Historical India*, Simla, (1973), pp. 70-71.
6. Pandey, B.M., 'Ring-wells in Ancient India,' *op. cit.*, p. 219.
7. Roy, T.N., *op. cit.*, (1977), p. 184.

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Among other sanitary devices of this period, a reference may also be made to a *kachchā* drain which was perhaps meant for carrying off the surface water of the adjoining houses. It was 2 *m.* wide at the top and was exposed upto the length of 4.50 *m.* only.

Town Planning

There are three important constructions which may be considered under this head. They are embankment (?), moat and street. Of these, the most important was the structural activity found in the form of clay wall towards the south of the river Ganga. It was first identified by the excavators as an enormous clay rampart[1] having the maximum height of about 10 metres like those of the other contemporary cities of the Gangetic Valley. But later on, the same was described as an embankment "built only at this particular spot" to prevent the entry of flood water inside the habitational area.[2]

On the northern side of the habitation the inhabitants constructed a "channel or ditch and not a full-fledged moat"[3] which was meant to be a diversion channel connecting the Varuna and the Ganga.[4] Both these activities on the south and the north, according to the excavators and M.S. Mate,[5] were carried out to protect the township from ihe adverse effects of floods. In view of their importance in the ancient township of Varanasi, these two structural activities deserve some further consideration.

During the course of excavation two types of structures were found towards the south along the river Ganga.

(i) The earliest was the laying of some wooden planks (see pl. iv, c) which were traced to a length of 34 *m.* along the bank. This activity was noticed over the deposit of the earlier period (*i.e.*, Period I) and below the outer slope of the massive clay structure. The wooden planks despite heavy decomposition, vary in thickness from 3 to 5 *cm.* It was further noticed that "a 25 *cm.* thick layer of ash, charcoal and potsherds intervened between the clay embankment and the wooden platform."[6] According to the excavators, the "rise in the level of the Ganga and consequently deeper penetration of the flood water, this wooden plat-form fell in disuse and floods became a source of constant danger to the city. It was at this stage that a massive clay embankment was built as a defensive measure against

1. *IAR*, 1960-61, p. 37.
2. Narain and Roy, *op. cit.*, (1976), p. 49.
3. *Ibid.*, pp. 22-23 and 58, fig. 9.
4. Roy, T.N., *op. cit.*, (1977), p. 196.
5. Mate, M.S., 'Early Historical Fortification in the Ganga Valley' *Purātattava*, No. 3, (1969-70), p. 67.
6. *IAR*, 1964-65, p. 45, also Narain and Roy, *op. cit.*, (1976), p. 22.

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floods."[1] It is not clear from the above whether the provision of wooden platform was in any way connected with the measures against the flood. However, it would be quite illogical to think that a small wooden platform, as noticed at Rajghat, would ever have been sufficient to protect the habitation from the flood menace of any river of the size of the Ganga. Nor there is any evidence to suggest that the water level of the Ganga had been much lower during the fifth-sixth century B.C. than that of today. It is most likely that this wooden platform served as a step. There is yet another possibility that it could have been used as a platform to facilitate loading and unloading of goods which might have been coming and going through the river routes, mostly for inland trade. As we understand from the Buddhist texts, Varanasi was an important commercial centre during the period.

The above cited excavator's views on the construction of clay embankment will presuppose that there was hardly any time-gap between the construction of the embankment and the platform falling into disuse. The presence of intervening deposit, mentioned above, goes against this assumption. Moreover, there is no definite evidence to suggest that the floods were in any way responsible for the platform falling into disuse. The deposit of ash and charcoal over the platform may suggest burning as a more probable reason.

The clay embankment thus represents the second structural phase of the Period II. It was raised directly over the natural soil at places where wooden platform was missing. The structure has two phases of its construction (see fig. 3, A). In the early phase it consisted of well rammed, compact, brownish clay, very hard to dig. "Its vertical extent height was 5.10 *m.* and basal width 19.80 *m.* The outer slope of the embankment was pronounced while the inner one lost its original contour due to weathering or more probably through the robbing of earth during the second phase of its construction. It must have been constructed by piling clay dug up from the adjoining areas."[2]

"In its second phase of construction it was raised by 1.10 *m.* thick mud filling over the top and also simultaneously patched by a similar filling of 0.80 *m.* towards the beginning of its inner slope. Both these fillings are shown in the section by layers 6A and 6B respectively."[3] We shall now examine these observation in some details.

The massive clay structure has been declared as an embankment by the excavators mainly on two reasons. The first and foremost, it was built only at a particular place *i.e.*, in the RGT IV B area where the river Ganga repeatedly

1. *IAR*, 1964-65, p. 45, also 1963-64, p. 58.
2. Narain and Roy, *op. cit.*, (1976), p. 48-49.
3. *Ibid.*, p. 49, fig. 8. It may be mentioned here that no such layer like 6B exists in the illustrated section.

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attacked the habitation and it could not be traced further on either sides.[1] Secondly, the evidence for frequent erosions were noticed on the outer side of the clay structure.

The argument putforth by the excavators in support of the first reason that this bund was constructed, "particularly at a point where the river seems to have been attacking the habitation area,"[2] does not seem to be based on logical grounds. There is nothing in the course of the river (see fig. 10) to suggest that it was a vulnerable point needing any special attention by way of reinforcement. During the recent unprecedented floods in the Ganga in 1978, the author visited the site of Rajghat with a view to examining the water level of the river vis-a-vis the mound. He was rather disappointed to note that no particular spot was more vulnerable than any other place at the site along the river Ganga. The excavators are also not correct in concluding that the embankment did not extend further on the river front, and was restricted in the area where it had been found in the excavation. Four small pits, named as Pits D, E, F and G, were excavated at different places along the Ganga (see fig. 1.) with a view to examining the extension of the meassive clay structure. The result was negative, according to the excavators. However, this author feels that not only the trenches laid for the purpose were much too small, but they had also not been judiciously located. In fact, two of them-cutting E and F were located in a rain-gully, a most unlikely place for finding undisturbed remains of any ancient construction. Moreover, the excavators seemed to have somehow missed the evidence, provided by their own excavations at the cutting RGT B/13[3] and the pit D,[4] as well as the *Sādhū kī Kuṭī* (see fig. 1 made by scooping out the compact clay of the so called embankment. At both the above cuttings, there is a clear evidence for the existence of the massive clay structure and at the former, even the alternate bands of silt and sand, resting against the outer slope of the socalled embankment are clearly noticeable.

Further, the evidence for erosion and the signs of floods in the form of several silt and sand layers on the clay structure have been taken to strengthen the embankment theory. But it may be stated that this evidence cannot be associated with embankment alone as these signs are possible in the case of any kind of fortification. Such walls girdling the city, were raised, not with a single

1. The excavator's observation is that "Even today, if we look from the top of the present Malaviya bridge, we find that the river takes a sharp bend towards the mound and seems to attack it particularly at a point where we laid out trench RGT-IV. This was in fact one of the reasons why we took RGT-IV, particularly at this point of the mound." Narain and Roy, *op. cit.*, (1976), p. 50.
2. Narain and Roy, *op. cit.*, (1976), pp. 49-50.
3. *IAR*, 1963-64, p. 58.
4. The observation is based upon the personal examination of the sections of the cuttings B/13 and D. Unfortunately, it could not be illustrated.

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purpose but were used "against enemy attack, or against depredations of robbers and wild animals, perhaps also against inundations caused by overflowing rivers."[1] This fact may be corroborated very well by the archaeological evidence noticed at another important contemporary city Ujjain. This city was girdled by a massive clay rampart and there were evidence of frequent breeches in it which were also repeatedly repaired. Over the riverside the rampart was strengthened with a caging of wooden rafters covered by mud.[2] Thus considering the multi-purpose use of the city wall and the evidence from Ujjain, one may not agree in entirety with the excavators view regarding the purpose of the construction.

In view of the above, the embankment hypothesis of the excavators seems to lose the ground, and it is hoped that a more systematic work at Rajghat may bring to light sufficient evidence to identify the massive structure with the clay rampart, girdling ancient Varanasi, similar to the one, exposed at Ujjain. It is interesting to note that the literary tradition of ancient India as well as that of art confirm this conclusion.

We may now draw attention to the references in ancient Buddhist texts in this regard. It has to be admitted that the information is by no means adequate but it has been clearly mentioned that ancient city of Varanasi had a moat (*parikhā*) and a rampart wall (*pākāra*) for the protection of the settlement.[3] According to the texts, the latter was twelve leagues in circumference[4] and had also gates, towers and battlements.[5] *Mahāvagga*[6] also informs that it was provided with gates (*nagara-dvāra*). The position of these gateways is doubtful. But, according to Mahāsilava-Jātaka,[7] their total number was four presumably, one in each direction. Attention in this connection may also be drawn to the evidence obtained from a study of the sculptural details on the Amaravati *stupa* which show the city wall of ancient Varanasi. Inside the city wall, the King's palace is depicted and the people are seen coming in and going out from its main gate.[8]

Besides the above, the archaeological excavations at a number of sites have also brought to notice the existence of several walled cities in ancient India.

1. Ray, Amita, *Village Towns and Secular Buildings in Ancient India*, Calcutta, (1964), p. 64.
2. Sharma, Y.D., 'Remains of Early Historical Cities,' *Archaeological Remains Monuments and Museums*, New Delhi, (1964), pt. 1, p. 69, pl. XIII.
3. Cowell, Jātaka no. 164, also Fausböll, Vol. II, p. 50.
4. Cowell, Jātaka no. 5 and 282.
5. Davis, Rhys, Buddhist India, (1903), p. 63, as cited in Ray, Amita, *Village, Towns and Secular Buildings in Ancient India*, *op. cit.*, p. 67.
6. Misra, G.S.P., *The Age of Vinaya*, p. 221.
7. Cowell, Jātaka no. 51.
8. Eastern Art, vol. 2, 1930, p. 223, as cited in Rai, Udaya, Narayana., *Prāchīna Bhārata men Nagara Tathā Nagara Jīvana* (Hindi) Allahabad, (1965), p. 364.

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Particular mention in this respect may be made of Ahichchhatra,[1] Kauśāmbī,[2] Śrāvastī[3] Vaiśālī,[4] Rājgir,[5] New Rājgir,[6] Ujjain,[7] Eraṇ,[8] Taxila,[9] Bangarh,[10] Chandraketugaṛh,[11] Śiśupālgaṛh,[12] Mathurā,[13] Champā,[14] *etc.*

These were fortified cities and many of them were flourishing township at the time when ancient Varanasi occupied a prominent place. A careful examination of the contemporary archaeological and literary evidence shows that important ancient township were invariably surrounded by city walls. Archaeological evidence further shows that a majority of these were originally encircled by mud walls which were repaired, strengthened and made higher from time to time. There is also evidence to suggest that the capital cities of the Gangetic Valley were fortified and "since any city of importance was surrounded by prākāras (walls pierced by four gates at the four sides, and superimposed by towers,"[15] it is difficult to understand how an important place like Varanasi could become an exception to this feature of most of the settlements. The evidence of moat at this place also provides an important clue to the existence of the rampart wall. In this connection, the view of A. Ghosh is worthy to note as he mentions that 'the moat and rampart were the result of the same operation, namely the heaping up of the material scooped out to from the

1. Ghosh, A., and Panigrahi, K.C., 'Pottery of Ahichchhatra,' (U.P.), *Ancient India*, no. 1, New Delhi, (1946), p. 38 and *IAR* 1963-64, p. 44. The excavations of 1940-44 and 1963-64 have brought to light the remains of a mud rampart. In the earlier work it was found below a brick wall of the 1st century B.C. But in the later work mud rampart belonging to Kushan times was found.
2. Sharma, G.R., *The excavations at Kauśāmbī 1957-59*, Allahabad, (1960), pp. 22-23 and pp. 27 ff. Regarding its date K.K. Sinha has raised some serious objections which is dealt with in detail in his paper. Sinha, K.K., 'Stratigraphy and Chronology of Early Kausambi,' *Radio Carbon and Indian Archaeology* editors Agrawal, D.P., and Ghosh, A., Bombay, (1973), pp. 231-238.
3. Sinha, K.K., *Excavations at Śrāvastī 1959*, Varanasi, p. 10, and pp. 17-19.
4. Deva, Krishna and Mishra, Vijayakanta, *Vaisali Excavations: 1950*, Bihar, (1961), pp. 14, ff. fig. 6.
5. Ghosh, A., 'Rajgir 1950,' *Ancient India*, no. 7, New Delhi, (1951), pp. 66-67.
6. A mud rampart datable to sub-Period IIA has been reported. *IAR*, 1961-62, p. 7 and *IAR* 1962-63, pp. 5-6.
7. Sharma, Y.D., *op. cit.*, (1964), pp. 68-70.
8. *IAR*, 1960-61, p. 17, 1961-62, pp. 24-25, 1962-63, pp. 11-12, 1963-64, pp. 15-16, 1964-65, pp. 16-18.
9. Marshall, J. *Taxila*, Vol. I, Varanasi, (1975), pp. 112-115.
10. Goswami, K.G., *Excavations at Bangarh*, Calcutta, (1948), p. 34.
11. *IAR*, 1955-56, p. 30.
12. Lal, B.B., Śiśupalgaṛh 1948: An Early Historical Fort in Eastern India,' *Ancient India* no. 5, pp. 74-75.
13. Joshi, M.C., 'Mathura as an Ancient Settlement,' pp. 4-6 (Cyclostyled copy).
14. *IAR*, 1968-69, pp. 4-5, 1969-70, p. 2, 1970-71, pp. 4-5.
15. Ray, Amita, *op. cit.*, p. 48.

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moat, has been recognised at all excavated sites where the rampart can be identified, except those where the defences are of brick or masonry." He further supports his view by quoting Kauṭilya that the "*vapra* (mud-rampart) should be made out of the *Khāta* (dug-up material)."[1] The sites like New Rājgir, Eraṇ Ujjain, *etc.*, were all encompassed by a mud rampart and further surrounded by a moat. Thus, the presence of any one, either moat or *vapra* (mud rampart), presupposes the existence of the other. Coming to the evidence from the Rajghat digging, it is indeed interesting to note that, according to the excavators, both the socalled embankment and the surrounding moat (written with a question mark) belonged to precisely the same period and both also under-went-two phases of their construction. The simultaneous increase in the width of the moat and the height of the clay wall may suggest that the inhabitants felt insecure, and hence the moat was widened and the height of the clay structure was further raised. The dimensions of the clay structure basal width, 19.80 *m.* and vertical extant 5.10 *m.* in the first phase and further raised by 1.10 *m.* in the second phase also seems to point out in favour of a fortification wall. The full extent of this massive clay work, however, could not be traced due to various factors.

In view of the above archaeological and literary observation the excavators view regarding the identification of the clay structure on the river side as an embankment will require revision. It may be thus provisionally identified (till further confirmation) as a defence wall of the city which is also represented on the Amaravati *stūpa* and referred to in the Buddhist literature. Whether the need to provided a defensive enclosure around the ancient Varanasi arose as a result of a real threat of an external attack is difficult to decide. We may, in this connection, draw attention to the chequered history of Varanasi and the inherent political instability arising out of mutual rivalries of the Kingdoms of Kośala, Magadha and Vatsa which held control over Kāśī at different times.[2] Alternatively, the construction of a defence wall may be seen as a symbolic construction of the authority of the local rulers, who could control the entry and exit of people.

Moat

The main settlement (*i.e.*, Mound 1) was also encircled by a ditch or moat as clearly evidenced by its existence on the north—west as well as the south—west (see fig. 1). Its absence in the remaining directions was mainly due to the reason that the settlement (*i.e.*, Mound 1) was naturally endowed on these sides by two rivers, the Ganga and the Varuṇā. This ditch or moat was constructed in two phases. During its first phase it was 7.66 *m.* wide at the top and 2.35 *m.* deep, while in the phase second it was further "widened upto 37.22 *m.* and joined with the other end

1. Ghosh, A., *op. cit.*, (1973), p. 51.
2. For details, see chapter I.

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of the habitation site over the smaller Mound 3."[1] It was further connected with the river Varuṇā on the one side and the river Ganga on the south-west.[2] The existence of a ditch or moat has been assumed on the basis of the presence of a depression on the northern side and the confirmation of a ditch by the excavation at the suspected point on the north eastern periphery of the settlement. The hypothesis though termed provisional is a reasonable one and gets further corroboration from the literary evidence. The description in the Arthaśāstra of Kauṭilya conforms to the situation in ancient Varanasi. Here in it has been mentioned that the ditches were to be "filled with perennial flowing water or with water drawn from some other sources."[3] It was only possible when the ditches were also connected with rivers. The later work like *Brahmāṇḍa Purāṇa*[4] endorses that "the ditches were excavated with their gates connected with rivers." In *Vāyū Purāṇa*[5] also we get a similar expression. Further confirmation of this view can be found in the Buddhist texts, which make specific mention of the ditch (*Parikhā*) around Varanasi.[6] It is interesting to note here that the ditch found at Rajghat answers to the description of the above literary allusion. The alternative view that the ditch might have served as a diversion channel for the flood water seems far fetched.[7] The existence of moats around numerous ancient Indian townships has been proved by the archaeological excavations at a number of sites like, New Rajgir, Eraṇ, Ujjain, *etc.* The evidence from the last mentioned site is interesting in the sense that here also the moat was dug all around the habitation, except the river side. There are quite a few references to the moat in different ancient texts, thereby indicating that construction of a moat was not an unusual phenomenon.[8]

1. Narain and Roy, *op. cit.*, (1976), p. 58.
2. *Ibid.*
3. Shamasastry, R., Edi. and Tran, *Kauṭilya's Arthaśāstra*, Mysore, (1961), p. 50.
4. Dutta, B.B., *Town Planning in Ancient India*, Calcutta and Simla (1925), p. 94.
5. It is said in the *Vāyū Purāṇa* that the mouth of the moat should be connected with the river, Rai, Udaya Narayan., *op. cit.*, (1977), p. 242.
6. Cowell, Jātaka no. 164.
7. Roy, T.N., *op. cit.*, (1977), p. 196.
8. Thus, according to literary evidence, the ancient city of Indraprastha, Hastināpura, Mathurā, Champā, Mithilā, *etc.*, were all encompassed by a wall and further surrounded by one or more moats. The city of Mithilā was encircled by three moats-a water-moat, a mud-moat, and a dry moat. (Rai, Udaya Narayan, *op. cit.*, p. 33 and pp. 72-76). The number of ditches is optional, depending upon the necessity and security of the place. Thus, we read in Devī Purāṇa that the number may be two, three, four, or eight as the ground requires (*bhūmibasat*). But, Kauṭilya fixes the number at three; and the three ditches are to have an intermediate space of one daṇḍa (6 ft.) from one another." These were spanned by bridges.....could be raised or lowered when occasions arose. They "were, in some instances, so adjusted with mechanical devices that an enemy, once having set his feet on them could be easily swung into the ditches." Dutta, B.B., *op. cit.*, p. 91 and pp. 94-95. Kauṭilya refers that it should possess lotus plants and crocodiles so that no person could cross the moat with safety. Shamasastry, *op. cit.*, p. 50. For details see, Rai, Udaya Narayan, *op. cit.*, pp. 239-244.

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Among other activities connected with town planning mention may be made of a *Kachchā* street belonging to the early phase of this period. It was traced upto 2.65 *m.* from east to west and 3.44 *m.* from south to north. The street was built "after giving a soling of earth of about 10.2 *cm.* in thickness, containing pot-sherds, gravel and mud patches throughly rammed. This was again covered by another soling of packed earth of about 10.2 *cm.* in thickness. Thus in Section, it was 33.1 *cm.* in thickness."[1]

Period III

The end of the NBP ware period witnessed some very important changes in the habitation. They were the use of burnt bricks, elaborate foundations, construction of brick-lined wells, the use of terracotta rings in draw wells, surmounted by well heads of wedge-shaped-bricks, regular planning of houses and the use of tiles for roofing. Among the sanitary devices the use of large storage pots placed one above the other, with their knocked bottom as soak pits and elaborate brick lined drains are noteworthy.

Added attention, however, may also be drawn to the fact that the mounds 2 and 3, which were fairly well occupied during the preceding periods, were now uninhabited. It appears that now onwards the entire population of mounds 2 and 3 was accommodated in the main settlement, *i.e.*, the mound 1.

Early Phase : (Circa 2nd Cent. B.C. to the beginning of the Christian era)

A considerable use of kiln-burnt bricks for the construction of houses, *etc.*, seems to have began during this period as a other contemporary sites in the Ganga valley.

The use of mud bricks at this place was limited during the period. The houses were often built on mud and brick-bat foundation. In one instance, a foundation of fragmentary bricks with an underpinning of *kaṅkar* was also noticed. The bricks were laid in mud mortar. The lay out of the houses was oriented approximately along the cardinal directions. Their plan revealed that they were of a simple utilitarian type with rooms built in a row. Floors were laid over a soling brick-bats, at times mixed with potsherds and small sized rubble. It was then rammed and covered with a layer of clay.[2] Among other building materials the use of wood is attested to by the presence of post holes and tiles.

Nearly nine houses of this phase were exposed during the excavations. Of these, only a few provided some kind of coherent plan. The houses usually consisted of two or three rooms and often provided with other amenities like drain domestic well, soak-pit and ring-well, *etc.*

1. Narain and Roy, *op. cit.*, (1976), p. 54.
2. Narain and Roy, *op. cit.*, (1976), p. 26.

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The people belonging to the first structural phase were perhaps living in the houses, consisting of atleast two rooms (fig. 4). A few had their opening towards the eastern side, as evidenced by the presence of a 66 *cm.* Wide door sill in one of the houses. One of the rooms (marked as no. 43) in this house measured 2.57 *m.* from E-W and 2.36 *m.* from N-S and the other (no. 42) 2.13 *m.* from N-S and 2.56 *m.* from E-W, suggesting that there was some sort of uniformity in the size of rooms. These were probably used as living rooms and for other specific purpose like bath, *etc.*, a separate provision was made outside the house by constructing a platform, attached with a brick lined drain to carry off the refuse water. The house also contained a brick lined well (Well 3, fig. 4), situated towards the northern side. The seal bearing the legend Revatimitra in 2nd Cent. B.C. character was picked up from the plinth of this house. Can it be inferred that the occupant of the house was a person named Revatimitra ?

During the second structural phase the wells of the earlier phase were reused with some modification. This has been suggested on the ground that its height was further raised by adding a terracotta ring and 17 courses of bricks. These later additions made it rectangular on plan during this phase. Since there is no stratigraphic basis for assuming two phases in a construction, it is not unlikely that both the brick and terracotta ring lining may belong to one and the same phase. Beside this, a platform was also added to it and it was further connected with drains E and D, the latter being partially covered. The existence of two post-holes "one at the junction of walls 34, 34A and 38 and another over structure 37, suggests that there was some sort of roofing over these structure forming part of a single complex having domestic well, platform and drains all round it."[1] Some more houses also existed in the vicinity of this complex, as evidenced by the fragmentary remains of walls 39A, 39B and 40. However, the existence of another house in the same area can be suggested by the presence of brick lined well and the drains C situated very close to it (see fig. 4).[2] Other details of the house are lacking.

A noteworthy feature of the drain was that it was partially covered with a north-south gradient. Two bricks were found fixed vertically in the drain just before it was closed. The opening between the bricks and the bed of the drain was devised in such a way as to prevent the choking of the drain. It was an ingenious device to enable the drain to function smoothly for a longer period.

The other house remains belonging to the second structural phase of the period were found in another part of the mound (RGT cutting XIA and XIB). Here the existence of four house complexes (see fig. 5) is clearly discernible. On the basis of the available remains, it can be surmised that some of the house

1. Narain and Roy, *op. cit.*, (1976), p. 44.
2. Narain and Roy, *op. cit.*, (1976), pp. 26-27, 44.

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complexes had as many as three rooms instead of two. This may well mean a slight change in living pattern of the phase.

A house nos. 21, 21a and 21b was separated from another one (no. 20) by a narrow lane measuring nearly one metre in width (see fig. 5). This house (*i.e.*, 21) indicated the existence of atleast three rooms (nos. 21, 21a and 21b), all being rectangular on plan. One of the rooms (*i.e.*, 21) measured 2.80 × 2.40 *m.* The size of the other adjoining room was also approximately the same. An interesting feature was noticed, however, in the room 21b, which was found associated with the ring well 2, exposed only upto 6 rings (see fig. 5). Since no other details of this ring-well are available, it is difficult to surmise its function. However, following Ghosh,[1] it may be held that its presence in a room may indicate its use as privies. The first two rooms (*i.e.*, 21, 21a) might have opened either in the east or in the west. It would appear that some of the rooms were interconnected as in case of 21A and 21B.

This house (*i.e.*, 21) was separated from the house 22 by a maximum distance of 50 *cm.* in the western side and 25 *cm.* in the eastern side (see fig. 5), suggesting thereby that the intervening space could never have been used as a passage, as was surmised earlier in the case of the two houses, 20 and 21. The frontage of the house 21 was partially obstructed by the house no. 22. The full extent of the other house (*i.e.*, 22) is not known, although at least its two rooms can be clearly noticed. The bigger room measured 3.10 *m.* in length and 2.60 *m.* in width.

In between the houses 22 and 23 was found a ring-well no. 3 (fig. 5), having an inner diameter of 76 *cm.* It was enclosed by a well-laid brick pavement. The existence of the surrounding brick platform suggests that it might have served as a draw-well for taking on only the drinking water and, its pavement served to secure the area around the well for not getting slushy. The platform was built in a sloping manner so that the surface water might not go into the well. Further its position suggests that it was meant for common use. Brick pavements around ring-wells were noticed at other places also, such as Kumrahar,[2] Rairh,[3] and Besnagar,[4] *etc.*, suggesting their wide prevalence.

The remains of the house 23, situated on the northern extreme in the same locality (see fig. 5), also revealed the existence of at least three rooms, marked as 23, 23a and 23b. The dimensions one of the rooms (*i.e.*, 23a) was 2.70 *m.* ×

1. Ghosh, A., *op. cit.*, (1973), p. 71. He further thinks that "this would imply a lack of open spaces in the inhabited area of the city and would contrast with earlier rural condition, when with ample open fields all round, the need for private arrangements did not arise."
2. Altekar, A.S., and Mishra, Vijayakanta, *Report on Kumrahar Excavations 1951-1955*, Patna, (1959), p. 31.
3. Puri, K.N., *op. cit.*, p. 16.
4. Bhandarkar, D.R., Excavations at Besnagar, *AR, ASI*, 1914-1915, p. 79.

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2.15 *m.* The full extent of the remaining two rooms is not known, but their width must have been approximately the same as noted in the case of 23a. This house was approached either from the eastern or the western side. It seems that the room 23a did not have any opening for the door either on the northern or the southern sides, since they were obstructed by a soak-pit and a ring-well on the former and a brick platform on the latter side. It is, therefore, presumed that this room and the other adjoining rooms might have been interconnected.

The rooms in this house complex had mud floors.[1] A ring-well no. 1, a soakage earthen jar with perforated bottom and a soak-pit, associated with this complex were located out-side this house on the northern side. The roofs of the houses were supported generally by wooden posts as evidenced by the presence of post holes in three such houses.[2] Terracotta tiles, which were perforated and grooved as a rule for affording firm and easy joints, were used for covering the roofs.

The above evidence leads us to make the following observations about the settlement pattern of this phase.

The people were living in the houses consisting of two or three rooms, having one or two doorways. Often simple platform constructed outside the house were provided for bath. These were open baths. However, in one instance, there appears to be a possibility of the existence of a separate arrangement for privy, *etc.* This view can be strengthened by the literary evidence too, where mention has been made of constructing various apartments.[3] Some of these houses had their own domestic wells, which at times were attached with burnt brick drains for letting out water. The drains were either open or partially covered. Besides, there is an instance to suggest the common use of the draw-well by the occupants of two or more houses of the same locality. Two different kinds of arrangements have been noticed, one involving the use of a brick-lined well together with drains and the other having ring well without drains. The former was being used by one family or at the most two families, while the latter was some sort of a community well. Hence it is possible to guess that the brick lined wells belonged to people having a superior economic status in comparison to those who were using the ring wells for the same purpose.

As the evidence suggests, the houses were constructed adjoining to each other and were separated by a space left in between the two complexes. This intervening space was not always of equal width. This seems to have been done with a view

1. Narain and Roy, *op. cit.*, (1976), pp. 68-69, fig. 12.
2. *IAR*, 1965-66, pl. XXXIX, B, XXXVIII, p. 55, also Narain and Roy, *op. cit.*, (1976), fig. 5, p. 44.
3. An Upāsaka has built 'a storied house, an attic, a cave, a cell, a store-room, a fire-room, a kitchen, a privy, a place to walk in, a well, a well house.' *Mahāvagga*, III.5.9.

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to avoiding obstruction of light and air to the neighbouring house. It is interesting to note that Kauṭilya[1] also mentions of leaving space between the two houses. According to B.B. Dutta, "This reservation of an intervening space between any two houses of the same owner or two neighbouring tenements of different owners is conducive to sanitation."[2]

The open space left between the houses 21 and 23 might have been commonly utilized by the occupants of the houses 21, 22, and 23 for various purposes as play ground, common meeting place, *etc.* The above observations in respect of the housing activity of the phase thus suggest an element of planning.

Late Phase

The study revealed that broadly two varieties of houses were constructed during this phase. Under this are included (i) those houses which shared the general features of the house plans of the early phase (*i.e.*, the houses were constructed in a row) and (ii) variety comprise of those houses which show some new features. The former exhibited simple plans as in the preceding phase. In some cases the houses had additional amenities like bathroom; well-room, kitchen and store, *etc.* In a few cases, the number of rooms shows an increase as compared to the preceding phase. Mostly such houses had paved floorings which were provided with brick-built drains. The houses under the second variety occupied more area in comparison to the preceding one. The changed variety was thus getting an easy acceptance. The houses were built mostly on a rectangular plot having a courtyard either in the middle of the complex of placed in the corner of the plot but the rooms in both cases must have their openings facing the courtyard. A noteworthy instance is provided by a house complex which was enclosed within a body wall (see fig. 2). Such houses were generally carefully planned and were also provided with elaborate drainage system.

In the literary texts, their is a reference, to *ekaśāla, dviśāla, triśāla, chatuḥśāla* variety of houses depending on whether the rooms are placed on one, two, three or four sides of the plot.[3] The house complexes of Varanasi described above, may well belong to either of the above variety excluding, however, the *chatuḥśāla* variety of which no examples have been reported from this phase.

Reference may be made at first to the two house complexes situated close to

1. He says that, 'Between any two houses or between the extended portions of any two houses, the intervening space shall be 4 *pādas* or 3 *pādas*. Although our evidence is not in accordance with Kauṭilya's prescription but it seems that reservation of space between the two houses was generally observed. A deviation from this is indicative of the fact that there was no hard and fast rule to observe this ideal. (Shamasastry, *op. cit.*, p. 189).
2. Dutta, B.B., *op. cit.*, p. 257.
3. Dutta, B.B., *op. cit.*, pp. 249-250, 257.

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the massive drain 2, one in the east-west and another in the north-south alignment (see fig. 6). Although partially preserved, the place of the complex is fairly clear. The precise extent and the number of apartments of both the buildings could not be ascertained, as they had been generally disturbed due to the construction of the structures of the succeeding Period IV (*i.e.*, the structure marked as 43 and the under ground structure 2 and 4). However, as indicated by the available remains, the house built in the east-west alignment (numbered 35 and 35a) was occupied during the two successive phases of the period (Period III) and thereafter it was abandoned. The maximum available area covered by this house measured 8.22 *m.* in the east-west alignment. Its exact width could not be achieved. The house, in both the phases, was built of complete bricks. During the first phase it consisted of two apartments, one big (*i.e.*, 35) and the other small (*i.e.*, 35a). Originally, the larger apartment, measuring 5.04 × 2.30 *m.*, must have been divided at least into two to make separate rooms, and might have been used as a living room. The smaller apartment in the western extension, measuring 2.12 *m.* × 1.62 *m.*, probably had a covered enclosure for the well, made of terracotta rings (R.W.4). The circular parapet of the well was made of wedge shaped bricks upto five courses. It has an inner diameter of 0.70 *m.* (see pl. V). It is interesting to note that similar constructions of parapet made of wedge-shaped bricks had also been noticed at other places like Hastinapura,[1] Bhita,[2] *etc.* The room was further provided with a drain for the outlet of the refuse water, the passage of which lay underneath the north-western wall of the apartment (See pl. VI). Regarding the main entrance to this house, no definite evidence is available. It is also clear that the two rooms were not interconnected as the smaller apartment was approached from the northern side, as evidenced by the passage given in the northern face of the wall (see fig. 6, door-sill 4).

During the second structural phase some important additions were made by constructing two apartments (numbered 38 and 38a); and a brick-build drain No. 13 (see fig. 6). Out of these two rooms, the smaller one, numbered 38a and measuring 2.16 *m.* × 1.25 *m.*, was a perhaps bathroom, attached to the apartment 35a. The bath and the well rooms were connected by the existing passage (door-sill 4) in the apartment 35a. It is interesting to note that the newly attached apartment (numbered 38a) was paved with a brick flooring (No. 15) and was further provided with an elaborate brick built drain No. 13 (see pl. VI). It was available upto a total length of 5.85 *m.* and discharged itself on the northern side. This drain was further connected with the earlier one coming underneath the well of the apartment 35a. It thus finally served the two apartments, numbered 35a

1. Lal, B.B., 'Excavation at Hastinapura and other Explorations in the Upper Ganga and Sutlej Basin 1950-52,' *Ancient India*, nos. 10 and 11, (1954-1955), pls. XXIII-XXIV, pp. 25-26.
2. *ARASI*, 1911-1912, p. 33.

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and 38a. Considering the dimensions, particularly the width, of the latter apartment, the disposition of the drain 13 and the paved floor sloping towards the drain, it may be suggested that the newly provided apartment, in all probability, was a bath-room. Since the floor of the bathroom was paved with brick, it is presumed that the other apartments of the house also had similar floors.

From the above description of the house we may conclude that it was of moderate dimension and consisted of four rooms, of which the two (numbered 35 and 38) were used as living rooms and one each was used as well-room and bath-room. The occupants were conscious of the need for sanitation as evident by the existence of the drain 13. The above description thus goes to suggest that the house was provided with better amenities and occupied by a family which perhaps belonged to an affluent class of the society.

Another contemporary house on the south, was built at a distance of about 3.25 *m.* in the north-south alignment (see fig. 6). It was occupied in three successive phases of the period with certain modification. During the first phase it consisted of four rooms (see fig.6, 34 to 34c) with the overall dimensions of 5.83 *m.* from N-S and 5.14 *m.* from E-W. Of these, two rooms, numbered 34 and 34a, measured 2.34 *m.*×1.28 *m.* and 2.62 *m.*×2.28 *m.* respectively. Both of them were approached from the eastern side as clearly evidenced by the door-sills. The passages left for the doors (see fig. 6, door sill 1 and 2) were 52 *cm.* and 62*cm.* in width respectively. Their narrow width suggests that the doors of these rooms probably had only one leaf each. The other two rooms numbered 34 b and 34c) associated with this complex were built on the southern side roughly at a distance of one metre. The precise extent of these two rooms could not be determined on account of the extensive disturbance caused by the structures of the succeeding Period IV. However, their width in N-S direction could be ascertained as 2.30 *m.* and 1.05 *m.* The northern wall of the room 34 b served as a common wall for both the room, and they were also interconnected, as suggested by the existence of a door-sill 3 (see fig. 6.). Considering the width (*i.e.*, 1.05 *m.*) of the room 34c we may suggest that it was not meant for living purpose and might have been used either as a store room. This small apartment did not maintain the symmetry of the house and was built at the north-eastern corner of the room 34b. An important feature associated with this building was a brick built drain (No. 12) composed of reused bricks (see fig. 6, and alsope vii). It was available upto a length of 3.75 *m.* with its channel varying in width between 18 and 22 *cm.* It discharged itself outside the house on the southern side. The house during this phase was open on two sides, as the southern and western walls of the adjoining room, numbered 36, were not erected during this phase. The presence of a pot at a place, from where the drain starts may suggest that it was meant for storing water. During the second phase, another room numbered 36, was added to this house on the southern side by erecting two walls, one on the southern and another on the south western sides.

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The remaining two walls of this later addition were the same as those of the existing rooms 34a and 34b. This newly built apartment measured 3.50 × 2.50 *m.* and might have been used as a living room. The drain 12 of the preceding phase went out of use as it was filled with rammed flooring of the room during this phase.

The intervening space of 3.25 *m.* between the two houses, 34 and 35 was closed during this phase by erecting a wall (numbered 37) on the western side (see fig. 6, numbered 37, III-2 and also section on A^1 to D^1). It would appear that the opening on the western side was closed with a view to blocking the passage towards the western side. This might have become necessary in view of the newly constructed public drain No. 2. It may perhaps be held that this drain and the western wall belonged to the same structural phase.

During the third structural phase, the house complex on southern side consisted of four rooms (numbered 39 to 39 c, see fig. 6) built in a row. Its eastern extension was abandoned. Instead, an additional room numbered 39 on the northern side was added (see fig.6, 39 III-3). This required construction of the eastern, western and northern walls afresh. That the people did not utilize the earlier walls is proved by the presence of a thin layer intervening between the top most level of the earlier construction and the base of the walls constrcted during this phase (see fig.6, section on A^1 to D^1). No clue as to the cause of the abandonment of this house complex on the northern side was found. This northern extension (No. 39) was the largest, measuring 6*m.* × 2.28 *m.* During this phase a small square structure numbered 40 was built at the north western corner of the newly constructed large sized room 39. The adjoining two rooms, numbered 39a and 39b, were used without any change. Only the pot-rest of the preceding phase fell into disuse. The last apartment 39c was probably not used for the living purpose as it was open on the southern side. It is likely that this room was used as a shelter for the cattle. This inference is strengthened by the existence of the base of two big pots (most likely the remains of large basins) which might have been used in feeding the cattle. (see pl. VIII).

From the available evidence, detailed above, we may suggest that during the first phase, the four rooms, two each on the northern and southern sides, the drain 12 and the pot comprised the house-complex. Of these, three (numbered 34, 34a and 34b) were reserved for the living purpose and the smaller room (numbered 37) might have served either as a kitchen or as a store room. Sometimes, storage vessels were kept in the living room also as evidenced by the existence of a pot-rest in one of the above mentioned rooms (see fig. 6, 34a).

During the second phase, no important change is noticed in the house plan, except that the occupants had converted the drain area into a room (numbered 36) most probably for the living purpose. The occupants of the third phase did not

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seem to have been affluent, as they used mainly brick-bats for the construction of the house.

The remains of some other contemporary buildings on the western side of the massive drain 2 (to be described later in detail) have also been brought to notice. However, the full extent of these buildings cannot be determined on account of extensive disturbances. But the remains seem to indicate the existence of some house complexes, belonging to three different structural phases of the Period (see fig. 7).

Of these, the house numbered 46 and 46a (see fig. 7) belonged to the first phase. It was built in the north-south alignment and indicated the existence of atleast two or more rooms. Besides, there were also some traces of another room, in the centre of which was located a well (No.7) (see fig. 7), having an inner diameter of 68 *cm.* The house and the well appeared to be contemporary and the latter might have been a part of the same building. If this assumption is correct, the two rooms (numbered 46 and 46a) of this house were used as living rooms and the remaining might have served as a covered enclosure for the well. It remained occupied only during the first phase and thereafter it was abandoned, as a thick layer indicating gap, intervened between the structures 46 and 46a and the structures numbered 48 of the succeeding phase.

The succeeding people of the second phase built their house numbered 48 over the remains of the earlier complex (46 and 46a). Unfortunately, the details of this house could not be gathered. However, the well-8 which is in all likelihood contemporary to this building, might have been associated with this complex. But there is no conclusive evidence in support of this assumption.

Another building belonging to the third phase is represented by a set of three rooms numbered 49, 49a and 49b (see fig. 7). In the construction of the first room (numbered 49) the occupants reused the wall of the earlier complex numbered 48. The lower four courses of this complex (*i.e.*, 49) belonged to the preceding phase II. The difference between the two phases of the wall can be very well demarcated. In the earlier complex the wall was of greater width, whereas in the third phase it was comparatively less. Out of the three rooms, the first, numbered 49, might have been used as a living room, while the adjoining room (49a) seemed to have been used as a kitchen, as evidenced by the existence of an oven in it (see fig. 7) A small room (numbered 49b), containing as well-9 (having an inner diameter of 76 *cm.*) was also attached to it. No clue of any kind could be had about the opening of this house. However, it was possibly located in the east. The floor of the room no. 49 was built of brick bats laid in mud. It is, therefore, most likely that the remaining rooms also might have had similar floorings.

The remains of another contemporary house built in the east-west alignment

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were also found. It consisted of at least two rooms, numbered 50 and 50a (see fig. 7), and was built exclusively of brick-bats. The two rooms measured 270 *m.*× 2.20 *m.* and 2.32 *m.*×2.20 *m.*

The above study thus shows that the house complexes belonging to the third phase in this particular area were built of brick bats and indicated an inferior construction in comparison to other buildings of this phase. Hence, it is natural to assume that the occupants of these poorly built houses belonged to less affluent class.

The fragmentary remains of atleast three other house complexes (see fig. 8) found in the same area, but to the north of the public drain 2 might have been built on a similar plan as that of the preceding ones described above. Here too there was a drain (No. 3) which was built in the east-west orientation, running between two complexes (numbered 11, 11a and 12, 12a). The situation of the drain suggests that the refuse water from these two houses flowed into this drain 3, through pottery drains. It was also evident that an open space was left between the two complexes for the common utilization. West of the house No. 12 existed another house (numbered 13), which had a floor (No. 7). Unfortunately, no proper plan of this complex could be recovered.

Evidence for houses built on similar plan was obtained from other parts of the mound also. The fig. 9 illustrates one such house which was built in the east-west orientation. Its lay out seemed more regular than those of the preceding ones. The house was of moderate dimensions and appeared to extend eastward. The overall measurement of the house, so far traced, was 16.28 *m.* and 4.45 *m.* in east-west and north-south directions respectively. The best preserved part of the building was on the western end. It comprised five complete rooms numbered 30, 30a, 30b, 30c and 30d (see fig. 9 and also pl. IX). Of these, the one numbered 30 was smaller than others and measured 2.60 *m.*×2.40 *m.* The remaining four rooms were almost equal in dimensions, each measuring approximately 3.80 *m.* from north to south and 3 *m.* from east to west. With the exception of the room No. 30, the floor of the rooms was paved with bricks laid in mud. These floors were generally made of complete bricks with the occasional use of brick-bats. But in the case of the floor No. 14 of the room 30a, only brick-bats were used. There was no evidence for any type of floor in the room 30. No indication of door-ways in any of the rooms could be traced due to extensive disturbances. It is a matter of speculation as to how all these rooms were connected with each other. The house probably supported a roof of tiles, the debris of which was found lying on the floor 14 of the room 30a. Considering the number of apartments and the quality of bricks used in the house, we may suggest that the occupants were of a well to-do class.

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We have so far discussed the evidence of the houses of the first variety in which the number of apartments ranged from one to five. We may now mention here the second variety of houses which were built on different plan suggesting thereby the emergence of certain new features. It is being discussed hereunder :

The variety (ii) is represented by three house complexes. One of these is shown in the fig. 9 with its different rooms bearing numbers 25, 25a, 25b, 25c, 25d, and the courtyard 25e. This complex was situated to the east of the house 34 (see fig. 6). The construction was made on a rectangular plot which covered an area of 82.35 sq. *m.*, having the two rooms in the western and three in the southern sides (see pl. X). In front of these rooms, a courtyard (marked as 25e) was provided which measured 6.24 *m.*×6.12 *m.* The rooms were built on L-shaped plan, and the two open sides were provided with walls to form an open courtyard. The length of the two rooms (*i.e.*, 25 and 25a) on the western direction was 2.72 *m.* and 2.22 *m.* respectively, but the width remained 2.26 *m.* in both the cases. Out of the three rooms situated on the southern side, the smaller one, marked as 25b, measured 2.46 *m.* × 1.50 *m.* The purpose of this room is unknown, but it could have served either as a bath-room or a kitchen or a store. However, in view of the disposition of the drain 8, just outside this room and the presence of a large sized pot in it, there appeared a greater possibility of its being a bath-room. The remaining two rooms (*i.e.*, 25c and 25d) on the same direction were of equal dimensions, measuring 2.24 *m.*×2.42 *m.* Thus it seems that out of the five rooms, four were probably used as living rooms and the remaining one for some other purpose presumably for bathing.

These rooms on the western and southern sides were separated by the drain 8, measuring 2.19 *m.* in length and running in east-west direction. The width of the channel ranged between 12 and 18 *cm.* The entire drain seemed to have been covered by bricks. It served the entire house and discharged itself outside the complex on the western side. The drain passing through the middle divided the complex into two main wings, *viz.*, the western and the southern. It is likely that the one wing was occupied by the menfolk and the another by the women of the house. In the absence of any definite evidence, we can only guess whether the rooms were interconnected or not. Regarding the main entrance to the house, no indication of any kind was found. Logically it should have been through the courtyard either on the eastern or the northern side, although the possibility of some subsidiary approach to both the wings through any one of the rooms also could not be ruled out.

Another house representing the second variety was found on the northern side at a considerable distance (see fig. 10). It was damaged by a massive drain 5 belonging to Period IV and the railway diggings of 1940s. The remains represented an incomplete plan of the house but an attempt was made to reconstruct it on the

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basis of the available evidence, as shown in the figure 10. It covered an area of about 6.22 *m.* by 6.35 *m.* and was enclosed by a set of rooms on the south-east and the north-east, and by a wall having the width of 30 *cm.* on the western and northern sides. It comprised a courtyard (marked in the fig. 10, as 16d) and presumably four rooms (marked as 16, 16a, 16b and 16c), varying in size from 2.20 × 1.65 *m.* to 2.10 *m.* × 1.36 *m.* It is difficult to suggest how many of these were actually used as living rooms, but it appears logical to surmise that atleast the first two *i.e.*, 16 and 16a) might have been used for the purpose. The complex also contained a well preserved brick-lined draw well (No. 1), having an inner diameter of 52 *cm.* It was surrounded by a brick platform (marked as 16e in the fig. 10), measuring 2.20 *m.* × 1.50 *m.* A large sized storage vessel was also found placed on the platform near the draw-well. A brick built drain 4 was attached with the house for carrying refuse water of the entire complex. Its disposition in the plan calls for a particular attention as it took an unusually long turn to discharge itself towards the northern side. It was built by laying one course of bricks at the bottom, and by raising two parallel sides of 30 *cm.* thickness to form a channel ranging in width between 10 and 16 *cm.* The main entrance to this house might have been from the northern or the western side through the courtyard. There is no trace of any *puccā* floor in any of the rooms and the courtyard.

As the evidence suggests, this house covered a small area. It consisted of probably four rooms of moderate size and a courtyard. The occupants had their own domestic well to obtain drinking water and the platform around it perhaps served the bathing and washing purposes. The elaborate brick built drain is a good example of the sanitary device.

In comparison to the houses described above, the no. 6 (fig. 11) was a fairly big complex, built on somewhat different plan. The area covered by the building, as per our reconstruction was about 14.28 *m.* × 9.76 *m.*, which presumably had eight rooms of varying dimensions. An important feature of this plan was the centrally placed spacious L-shaped courtyard, measuring 9.40 *m.* × 5.88 *m.* It was enclosed on three sides by different rooms and a wall in the southern direction. The position of the courtyard was interesting, as it divided the complex into two eastern and western wings. One of the rooms (*i.e.*, No. 6), which is square on plan, might have served as privy, *etc.*, although definite evidence of the nature of any sanitary contrivance in support of this assumption was lacking. The suggestion is mainly based upon the situation and size of the room. The remaining three rooms (*i.e.*, 6a, 6b and 6c) on the same side were presumably living rooms. Out of these three, the room 6a was the largest, measuring 4.12 *m.* × 2.14 *m.* Room nos. 6b and 6c were almost of the same size, measuring respectively, 2.62 *m.* × 2.14 *m.* and 2.56 *m.* × 2.14 *m.* The single room 6d situated on the northern side measured 3.10 *m.* × 1.65 *m.* It was further provided with a

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platform having a width of 1.10 *m.* The presence of the plateform might suggest that this room was not used for the living purpose, but could have served either as a store room or as a kitchen. The three rooms of the western wing (6e, 6f, 6g), with a size-range from 2.68 *m.* × 1.80 *m.* to 2.18 *m.* × 1.80 *m.* were probably used as living rooms.

The main entrance to this house appeared to have been at a place on the western side, where the room 6g ends. Access to the rooms of this house was through the courtyard. Beside this, the living rooms of both the wings seemed to have been interconnected.

The plan of this house clearly suggests that the rooms were not only airy but also had provision for the access of light. Considering its demensions and the number of rooms, it is possible to infer that the house was occupied by a large sized family of a well-to-do class. The floor of the courtyard was paved with brick bats. It is therefore, not unlikely that the entire house also had a similar floor.

As will be clear from the figure 2, there were instances of the existence of the houses of the two varieties built side by side. Reference may be made in this respect to the remains of at least three house complexes, all belonging to the late phase of this period. Out of these three, the two (*i.e.*, 2, 2a and 3 to 3f) were contemporary and built side by side. The one situated on the southern side had a boundary wall (No. 4), while no such evidence was available in the case of another house (*i.e.*, 2 and 2a). No detailed plan of any one of the buildings, could be traced, nor was the full extent of any of the rooms available. However, on the basis of the available data, an attempt may be made to briefly describe these house-complexes.

The house situated on the northern side (2 and 2a fig. 2) comprised at least two rooms. The brick paved floor 2, contemporary to this house was perhaps a part of this building. The large extent of this floor further leads us to infer that the house was of considerable dimension and possibly comprised more than two rooms. This floor was further provided with a brick built drain (no. 1), running east to west. This surface drain was meant for carrying the refuse and rain water of the paved floor 2. To the north of this drain, four post-holes, having diameter of about 15 *cm.* each, were sunk in the floor. The plan of these post-holes indicated the existence of a temporary small rectangular construction, which supported a light roof.

The other complex (3 to 3f), situated on the southern side, was found within a boundary wall (No. 4). Since no trace of this surrounding wall was found in all the directions, except in the east-west alignment, it was difficult to ascertain the entire area. However, the indications of at least six rooms and the masonry

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drain 2 within this enclosure were clearly discernible. The northern limit of this house was probably upto the point where the room 3a ended. Near this room was found the drain 2 having a width of 9.5 *cm.*, and running east to west. The existence of the drain near the small room 3a suggested that it might have been a bath room or a privy as it was too small even to accommodate one individual. In the three rooms (*i.e.*, 3b, 3e and 3f) a brick floor 3 running up to the boundary wall 4 was noticed. It is, therefore, quite likely that the entire house had such a floor.

There was not much change in the mode of the construction of roofs, except for the additional provision of terracotta finials. The occurrence of a large number of tiles[1] (pl. XI, A, 2 in both the phases suggests that these were used for covering the roofs, which would have been sloping. According to the avilable evidence, the earliest use of tiles in Varanasi began after the end of the Period II, *i.e.*, around 2nd century B.C. Mostly these tiles were provided with a hole at the top and a number of grooves running length wise. The tiles were fastened to the bamboo or the wooden frame of the roof through the hole by means of nails or cord. This type of roof construction with tiles seems to have been a common feature of the period elsewhere also, as similar tiles have been reported from several other sites like Kauśāmbī,[2] Bangarh,[3] Nevasa,[4] Nasik,[5] Nagara,[6] Kumrahar,[7] *etc.*

Besides, a few terracotta finials (see pl. XI, A1) also occurred during the Period, indicating that they were used perhaps to adorn the two ends of the uppermost ridge of the roof. Similar practice is current even today in this region.

Sanitary Arrangement

Period III :

The following sanitary contrivances were adopted during the period :

(i) Simple circular pits like those of the preceding period which were used

1. In all six hundred and sixty eight tiles were found during the session 1977-78. Since majority of these was fragmentary, their complete dimensions could not be determined. We could gather information only about their width, longitudinal grooves and the top hole. The width of all the specimens ranged from 11 *cm.* to 18 *cm.*, suggesting thereby that they were of varying sizes. The biggest complete specimen measured 26 *cm.* × 13 *cm.*
   The existence of the tiles having double holes was attested to by a few examples. Similar double holed tiles were reported from Bangarh also.
2. Sharma, G.R., *Excavations at Kauśāmbī : 1949-50*, MASI, No. 74, Delhi, (1969), pp. 29-30.
3. Goswami, K.G., *op. cit.*, (1948), p. 35, pl. XXIII.
4. Sankalia, H.D., Deo, S.B., Ansari, Z.D., Ehrhardt, S., *From History to Pre-History at Nevasa 1954-56*, Poona, (1960). pp. 53-63.
5. Sankalia, H.D., and Deo, S.B., *The Excavations at Nasik and Jorwe*, Poona (1955), p. 26,
6. Mehta, R.N., *Excavations at Nagara*, Baroda, (1968), p. 20.
7. Altekar, A.S., and Mishra, Vijayakanta, *op. cit.*, (1959), p. 41.

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most probably for the soakage (fig. 2, soakage pit-2 and pit III-1).
(ii) Ring-wells used for the soakage purpose and otherwise.
(iii) Soakage-jars with perforated bottoms (see fig. 3, B).
(iv) Brick-built drains of varying dimensions and types, and
(v) Terracotta drain-pipes (see pl. XII, B).

Of these, the (i) and the (ii) types continued from the preceding NBP ware period, while the remaining types started occurring only from this period. Out of these, the type (i) was rarely noticed, while the type (ii) was most prevalent during the early phase. However, it seemed to have lost its popularity from the beginning of the Christian era onwards. Both these types have already been discussed earlier in this Chapter.

The introduction of the types (iii) and (iv) marked an important event in the development of sanitary system. These appeared to have been introduced in Varanasi around 200 B.C. They are discussed hereunder :

Type (iii)—In this variety, two large sized earthen jars with knocked off bottoms were placed vertically one above the other inside a pit, which in one case measured 2.70 *m.* 0.61 *m.*[1] (see fig. 3, B). But at times, a single jar was also used for the purpose and was placed just outside the house (see fig. 5, soakage jar 1). However, it did not seem to be very common during the period. Their use at other places has also been attested to from sites like Kauśāmbī,[2] Vaiśālī,[3] Hastināpura,[4] Taxila,[5] Rairh,[6] Prakash,[7] Ujjain,[8] Kapilvastn,[9] *etc.*, suggesting their prevalence in a wide area. In spite of the fact that this new sanitary device involved less expenditure in construction, it could not become as popular in Varanasi as the soak-pits of the type (ii) were. Perhaps the soakage-jars had a shorter life and the device was also less hygienic. As the evidence suggests the soak-jars were meant to serve the individual houses.

(iv) *Masonry Drains*

Another very common sanitary device which was introduced simultaneously along with the above type (*i.e.*, iii) consisted of masonry drains. As elsewhere in the city, they were composed of burnt bricks and were constructed by first laying

1. Narain and Roy, *op. cit.*, (1976), fig. 4, pit. 7, p. 40.
2. Sharma, G.R., *op. cit.*, (1969), fig. 8, pls. IVA and VIIA.
3. *IAR*, 1958-59, pls. VIII B, p. 12.
4. Lal, B.B., *op. cit.*, (1954-55), pls. X, XIA; p. 25.
5. Marshall, *Taxila*, Vol. I, pp. 94-95, Vol. III, pl. 6c.
6. Puri, K.N., *op. cit.*, pl. XXXV, p. 16.
7. Thapar, B.K., 'Prakash 1955 : A Chalcolithic site in the Tapti Valley,' *Ancient India*, Nos. 20 and 21, (1967), pl. XIB, p. 13.
8. *IAR*, 1956-57, pl. XXXIIB, p. 27.
9. Srivastava, K.M., *Kapilvastu in Basti District of U.P.*, Nagpur, (1978), p. 4.

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bricks at the bottom and then erecting two parallel walls to from a channel. The depth and the channel of the drain varied according to the individual requirement. This was the most common method of constructing the drain, whether domestic or public, in all the periods, save for a few examples in which some changes were marked. It is interesting to note that these changes appeared for the first time in the beginning of the Christian era and not before.

During the early phase of the Period III, the drains were mostly open, though covered examples were also not wanting. In an instance it was partly open and partly covered. In another case, two vertical bricks were placed inside the drain at the very end to act as strainer, *i.e.*, to check the solid material and allow only the liquid waste. The application of such devices in the drains is important, reflecting a developed sense of hygiene. The drains in the houses of this phase were either attached with the draw-wells or the bathing platforms.

The drains of the late phase were constructed more or less in the same manner, as those of the preceding phase. During this phase, however, some changes in their construction were also introduced. These new features are mentioned hereunder :

(i) Provision of a channel in the brick paved floor for the outlet of the refuse water (see fig. 2, drain 1),
(ii) Provision sometimes, of a channel underneath the walls (see fig. 6, 35a, fig. 9, 30d),
(iii) Changes in the construction of public drain 2.

It may be stated here that from the late phase of the Period III onward, masonry drains became the most popular sanitary device, as is the case with other contemporary cities of the Ganga valley. Its popularity can be realized by the fact that they almost replaced the first three types of sanitary arrangement at Rajghat during this phase. Further, the disposition of drains in and outside the houses suggests that they were meant to serve the entire complex.

In the preceding phase, the drains were mostly attached with the wells. This practice continued even in the late phase, but now they were disposed in such a manner that, besides the well area and bath rooms they carried off the refuse water of the entire complex, including its various rooms and the courtyard. In this regard a particular example of the surface drain 10 may be cited, which discharged the refuse water of the courtyard as well as the rooms outside the house towards the west (see fig. 9). Besides the drains 1 and 12 belonging to two different houses also perhaps served in a similar manner (see figs. 2 and 6). Sometimes a drain (*e.g.*, the drain 3, fig. 8) ran between two house complexes and presumably, aided by the terracotta drain pipes, it served both the houses. Besides these, it was also noticed that, in some cases, the provision was made for a channel underneath the walls for the outlet of water (see fig. 6, room 35a, fig. 9, room 30d). It may

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be stated that nothing definite was known as to where these house-drains terminated, as none of them was found flowing into any kind of soak-pits or manholes, *etc.*

Besides these house drains, this phase also witnessed, for the fisrt time, the construction of a public drain no.2 (see fig. 6, also pl. XIII). Running parallel to the houses (*e.g.*, nos. 38&42 *etc.*, see pl. XIV) in the north-south direction, this massive drain was available upto a length of 18.75 *m.* but could not be traced farther. The point from where it began was unknown, but it proceeded towards the south and perhaps discharged itself finally in the river Ganga. Its mode of construction is interesting and calls for particular attention, as a similar drain (private or public) has not been found either in the preceding or the succeeding period of Varanasi. First, a brick paving, approximately of 1.13 *m.* width, was laid at the bottom all along its length. Over this were erected two parallel walls, each of 44 *cm.* width to form a channel of 25 *cm.* Then again two more walls of 28 *cm.* width each were further erected over the earlier ones approximately in their centre (see fig. 6, drain 2 and section on A-B).

Considering its dimensions it may be regarded as an important public drain of the period, meant for carrying off the refuse water of a sizeable part of the city. We have no definite evidence to suggest whether the individual house situated close to this drain on either sides had any arrangement to discharge their refuse water into it or not. However, the recovery of terracotta drain pipes from the adjoining houses is full of significance in this connection. It might be presumed that the private drains of these houses discharged themselves in this public drain 2 with the help of the terracotta drain pipes. It can thus be noted as a remarkable civic amenity available to the citizens of Varanasi during this phase.

V. Terracotta Drain Pipes

Another noteworthy sanitary device consisted of pottery drains introduced during the late phase of this period (see pl. XII B). No evidence in regard to their precise use at this place was available. However, from their occurrence at several other sites like Kauśāmbī,[1] Ujjain,[2] Rairh[3] and Chandraketugarh,[4] *etc.*, we may suggest that they were used as surface drains and fitted into one another to have the desired length. Presumably, with the help of these pottery drains, the individual houses, in some cases, might have been discharging their refuse water in the public drain or the gully pits.

1. Sharma, G.R., *op. cit.*, (1969), p. 34, pls. XIXB, XXB.
2. *IAR*, 1956-57, p. 27, pl. XXXIA.
3. Puri, K.N., *Excavations at Rairh*, p. 14.
4. *IAR*, 1956-57, p. 30, also 1959-60, p. 51.

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General Features of the Structures of Period III

On the basis of the available evidence, it may be held that this period witnessed some important innovations of great cultural significance in the settlement pattern. In the majority of the cases it was observed that wherever, the trenches on the Mound-1 were laid, a network of structural remains, belonging to the Period III, more particularly its late phase, had been encountered. There was hardly any place, over which the structures of this phase had not been found. In some cases the earlier foundations of the houses were reutilized by the later occupants. All these structural activities lead to an obvious conclusion that the city during this time was fairly densely populated.

The houses during the late phase, tend to become larger and were comparatively more commodious than those of the preceding phase. The rooms of the houses in some cases were quite spacious, for instance, one of the rooms measured 4 *m.* × 4.21 *m.* and in another case, one side of a room was as long as 6.06 *m.* Such houses had floors, made of burnt bricks and in "one of the corners of the floors, a small round depression was cut for placing conveniently a storage pot or some other utensils."[1] It leads us to infer that such spacious rooms were used for living and perhaps for other purposes like storing the items of daily use.

The study revealed that the houses belonging to the first variety were very plain. They were more numerous than those of the variety (ii). A considerable variation in the size of such houses was also noticed. They ranged from single roomed tenements (see figs. 7, 48) to houses with two (see fig. 7, 50, 50a also fig. 12), three (see figs. 7, 49; 49a, 49b also fig. 13a, 18, 18a and 18b), four (figs. 6, 35, 35a, 38, 38a), five (figs. 6 and 9) or more rooms of varying dimensions. One or more doorways were provided to them for access. Small sized houses in this category at times had a paved flooring in the front (see figs. 2, 8 and 12). Their relative abundance leads us to infer that the occupants of such houses were mostly ordinary people. On the other hand, there was a small number of house in which the number of rooms increased considerably. They were further furnished with amenities like bath room, well-room, store and kitchen. At times, these houses were also provided with courtyards, a feature which emerged only during the late phase of the Period III. One such house had two distinct wings. One of these two wings had comparatively more privacy and might have been meant primarily for the use of the women folk. The houses belonging to this variety consisted of, presumably, four to eight rooms. It appear reasonable to presume that the houses belonging to the second variety, in all likelihood, were generally occupied by the people of the upper classes.

Not much idea could be gathered about the lay-out of the houses. However,

1. Narain and Roy, *op. cit.*, (1976), pp. 28 and 74.

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it may be mentioned that the houses of both the varieties were constructed side by side. Sometimes a small piece of vacant land separated the two kinds of houses. At times the houses ran parallel to the public drain (see fig. 6 and also pl. XIV), but in one instance they were built on either side of the drain (see fig. 8). Our study also revealed that the houses belonging to the first two structural sub-phases of the late phase were much more symmetrical in plan than those of the preceding early phase. In the succeeding third structural Phase the house-plans tended to become increasingly irregular until the Gupta period, when a greater measure of symmetry was again introduced.

The various sanitary devices (both internal and public) adopted during the late phase of the Period III clearly suggest that the settlement was provided with adequate civic amenities. Among these the introduction of the public drain 2 needs a special mention, which finally poured the refuse water of the town in the Ganga It is interesting to note that even today the main public drains of the city discharge themselves in the Ganga.

Some of these houses had their own private draw-wells. At the same time, they were being built outside the house as well, these might have been commonly utilized by the various occupants of the locality.[1] These wells were mostly built of wedge-shaped bricks, but occasionally they were also made of terracotta rings, in which case they were further surmounted by a well-head made of wedge-shaped bricks on the ground level. It is presumed that the occupants of the houses which were not provided with any well, obtained drinking water either from the public wells or from the rivers the Ganga and the Varuṇā.

It has been observed that the provision for a bath-room was not considered an essential component of every house, as its presence has been noticed only in a few cases (figs. 6 and 9). Hence it seems that only members of the upper classes of the society could afford this amenity. Others either utilised the brick built platforms surrounding the wells or the two rivers flowing close to the site. As mentioned earlier, the small apartments in the houses were probably used as kitchen, privy, and, in some cases, as store.

At times these houses were also provided with barn (?) like structure, probably for the storage of grains.[2] Similar structure has also been reported from Hastinapura.[3] It is interesting to note here that references to granaries along with the residential houses are also found in the Budhist literature.[4]

The floors of these houses were either paved with bricks or made of rammed earth and brick-bats, depending on the economic status of the occupants.

1. Narain and Roy, *op. cit.*, (1976), p. 74, fig. 13.
2. Narain and Roy, *op. cit.*, (1976), pl. X, p. 54.
3. Lal, B.B., *op. cit.*, (1954-55), pl. XIII, B, p. 25.
4. Cowell, E.B., II, 199, III, 257, as cited in Ray, Amita, *op. cit.*, p. 37.

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The building material remained the same in both the phases of the Period III. The only difference noted was in the size of the bricks. These were invariably laid in mud mortar.[1] In the preceding phase the use of complete bricks appeared to be a common feature of the structures, while during the late phase, reused bricks and brick-bats along with complete bricks were used. Sometimes the entire walls were constructed of brick bats alone, suggesting somewhat inferior economic status of the owners. The shape and size of the bricks varied according to the nature of construction. Thus, wedge-shaped bricks were used in the construction of the circular structure like well, while the public drain of the late phase was built of the large sized bricks, measuring 44 × 28 × 5.5 *cm*.

The houses were roofed with tiles in both the phases. But, in the late phase, the two ends of the uppermost ridge of the roofs were further decorated by terracotta finials, as indicated by their occurrence in this phase.

It will be, thus, clear from the above discussion that the structural activities not only increased enormously during the late phase, but the house complexes were better planned and covered larger areas in comparison to those of the preceding phase. In fact, there was an overall development in the pattern of the settlement, indicating perhaps the growth in population.

Period IV

There are not many structures of this period at Rajghat. But the reason for this limited number of buildings may be that the area undertaken for excavating the remains of this period was comparatively small. However, from the available remains we may suggest that this period marked further development in the house pattern as well as in the town planning. Some new features have been noticed in the planning of the houses which show a superior construction as compared to those of the preceding period. Sometimes the houses were of considerable sizes, the construction of which would have certainly required improved skill in house building. Besides the continuation of the preceding varieties, houses built on *Chatuḥśāla* principle also came into existence for the first time. The construction of large-sized underground structures was indeed a very significant development in the history of this place.

The method of construction of the houses and the building materials remained almost the same, as noted in the preceding period. However, the use of lime plaster was introduced during this period. The remains of stone pillars found in one of the houses might indicate the existence of some different type of super structure. The structural remains of the period have been grouped under the

1. Narain and Roy, *op. cit.*, (1976), p. 28. Two sizes in the bricks have been noted, *i.e.*, 40 × 25 × 5 *cm*. and 39 × 29 × 5 *cm*.

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following heads :

1. Residential houses
2. Trade and Ware-house complex,
   (a) building remains
   (b) underground structures
3. Sanitary arrangements
4. Roads and lanes.

All these have been discussed in detail in the following pages.

1. Residential Houses

On the basis of the available evidence, we may suggest that houses belonging to varieties (i) and (ii) of the preceding period did continue even in the Period IV, though sometime with modified features. Instances of houses representing the variety (i) were rather few. They consisted both small and spacious rooms. There was a small house (fig. 13, B), consisting of at least two rectangular rooms (numbered 17 and 17a), roughly of the same dimensions, measuring 2.30 *m.* × 1.50 *m.* A paved floor existed in the front of the house. Contemporary to this house was a drain (no. 6), available upto a length of 7.68 *m.* and having a 15 *cm.* wide channel, which discharged itself in the eastern direction.

There is also evidence to suggest that the houses belonging to both the varieties were constructed side by side. Fig. 14 shows three different house complexes, two of them (8 and 9) representing the variety (i), while the adjacent house number 7 being of the variety (ii). The lanes 1 and 2 separated them from each other. The houses stood on both sides of these narrow lanes in this area. These lanes probably served as service lanes for the buildings standing on either side. It is interesting to note that similar narrow lanes can still be seen in the old localities of Varanasi in a very large number.

Out of the two houses representing the variety (i), the one (number 9, 9a and 9b), situated on the eastern extreme, was not very symmetrical on plan and consisted of at least three rooms. Of these, the room 9 was slightly bigger in size than the others, measuring 3.26 *m.* × 2.54 *m.*, while the remaining two were of the same dimensions, measuring 3.04 *m.* × 2.46 *m.* It is not possible to suggest as how the space of nearly one metre, left between the rooms 9 and 9b, was used by the occupants of this house. Another house representing this variety consisted of two very spacious rooms, numbered 8 and 8a. Of the two, the former measured 7.08 *m.* × 6.25 *m.*, and the latter 7.08 *m.* × 4.35 *m.*

The adjacent house (no. 7, 7a, 7b, 7c and 7d) probably represented the variety (ii) of the preceding period. In between this house and the one numbered 8 and 8a, ran the lane 1 in north-south orientation. The lane is only 66 *cm.* wide. The

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fragmentary remains of this house suggest that it consisted more than four rooms and presumably also an open courtyard (numbered 7d) in the centre. The rooms were built on two or three sides of the courtyard. One of the rooms (7b) measured 3.12 *m.* from north to south and 3.48 *m.* from east to west. It is on this measurement that the dimensions of the remaining apartments have been approximately reconstructed by us (fig. 14). The reconstructed house appears to be a self-contained one. It is not clear, whether the floor 5 made of mud and brick-bats and the wall 10 were in any way related to any of the complexes, illustrated in the figure.

Some interesting evidence for the structures of the Period IV were obtained from the salvage digging of 1940. A small clearance work was undertaken recently by the present author with a view to obtaining a better picture of the evidence. The stratigraphy of the remains is not preserved, but on general considerations, they seem to belong to the Period IV, though a few may be assigned to the Period III as well. The houses stood in this area on the two sides of the road. They were further separated by lanes of varying length and width. In two cases the lanes (3 and 5) were found joining the road, while in an other instance, the lane (numbered 4) ran parallel to the road upto a certain distance and finally joined the lane 3 in the northern direction. From the illustration of the structural remains (fig. 15) it is quite evident that the buildings of this particular area represented moderate sized dwellings. The rooms facing the road, in some cases, were comparatively larger. The clearing operation could expose the plan of a house (numbered here 53, 53a, 53b, 53c, 53d and 53e, fig. 15) only partially. It is tentatively assignable to the Period IV. It was occupied in two successive phases of the period, as evidenced by the ledge created on the foundation wall of the earlier phase (fig. 15, house 53, section on A-B). The structural remains of the second phase in fact followed the plan of the earlier one. Their continuity was demonstrated by the fact that the walls of the later phase rested, for the most part, directly on the earlier ones. The eastern part of this house is missing due to the extensive disturbances caused by the railway digging, and hence the full extent of the house is not known. It appears to be the best planned of all the moderate sized residential houses of the period so far exposed. Presumably it covered an area of about 14 × 14 *m.* The house was built in the north-south orientation overlooking the road. Such houses, facing the road, were known as *rathyāmukha* or *abhimukha* in the Jain literature.[1] The house comprised of at least four rooms of varying dimensions, a gallary (no. 53a) and a courtyard (no. 53e). The rooms were built on the two sides of the spacious courtyard, measuring 9.32 × 9.24 *m.*, and the remaining two sides were presumably screened by walls. Access to the house was through the gallery 53a which had an entrance from the road side. This gallary

1. Motichandra, 'Architectural Data in Jain Canonical Literature,' *JUPHS* Vol. XXII, pts. 1-2, (1949), p. 71.

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served mainly as a passage and could not have been used for any other purpose. Its position in this plan is very important, as it maintained the privacy of all the rooms and provided access to the rooms 53b, 53c, and 53d from its one side and to the room 53 and the courtyard from the other. Presumably the three rooms in a row were interconnected and all of them had their openings towards the courtyard. Of the three, the one (53b) near the entrance measured 3.44 × 1.88 *m.*, and the other adjoining room (53c) 2.92 *m.* × 2.42 *m.* The third room 53d was of the same width as that of the room 53c, but the length appeared to be a bit more. All these rooms, in all likelihood were used for living purpose. The room 53, measuring 7.60 *m.* × 2.45 *m.* and overlooking the road is on a different footing. Its size and situation were ideal for being used as a shop, though it is difficult to say anything definite about its exact use. Its exclusive position in the house might also suggest that it was used exclusively by the menfolk either as a drawing or a guest room. It is from the remains of this house that we found a few fragmentary stone pillars, delicately carved with foliage design. Their presence might indicate that they were meant to support some super structure. Thus, it may also indicate that the house had more than one storey. The available plan of the house suggests that every room could get direct light and air.

Besides this complex, some small houses also existed in this area, consisting nearly two rooms. Some of these were built in the east-west orientation (for example 61, 62, 63, 63a, 66, 67), while some others had the north-south orientation (for example 54, 55, 56 and 57). The precise dimensions of these houses could not be determined. However, it seems that between the two rooms of one of the houses, the one facing the road was comparatively bigger in size. It is likely that a solitary room situated on the road side might have been used as a shop rather than for living purpose. If the assumption is true, it is possible to infer that the road was lined both by residential houses as well as shops. Remains of residential houses have also been found from another part of the mound (*i.e.*, RGT 53). However, their plans are not discernible due to subsequent disturbances. But, there appears to be a clear evidence for a kitchen in one of the houses. The small room contained an oven, a storage pot on the floor and a small platform made of bricks for keeping articles of daily use.[1] The above evidence favours the assumption of a marked increase in the house-building activity and spread of the settlement on the mound 1.

2 Trade and Ware-House Complex

On the face of it, a group of structures spread in an area of roughly 4000*sq. m.* on southern portion of the mound 1 does not belong to a residential complex. A very dominant feature of this group is a series of underground structures. On the

1. Narain and Roy, *op. cit.*, (1976), p. 61 pl. XIII, fig. 10.

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presumption that these underground structures were connected with other buildings in the vicinity, we have ventured to suggest that the area, with its closeness to the river front of the Ganga, was being utilized for commercial purpose and the different structures exposed here were related to this purpose.

(*a*) *Building Remains*:

Three complexes numbered as 26, 31 and 27 (fig. 9), belonging to this period come under this category. Their plans and other details were brought to light as a result of the clearance work undertaken during the session 1977-78. Of these, the one numbered 26 (fig. 9 also pl. X) is an imposing structures, exposed earlier by Krishna Deva, who identified it as a temple.[1] The structure was rectangular on plan, measuring 16.44 *m.* from north to south and 17.60 *m.* from east to west and consisted of a courtyard which also had a hall in its centre. There were eight rooms enclosing the courtyard on the four sides, two each on the western and the northern sides, three on the eastern and one on the southern sides. These rooms are of varying sizes, ranging from 2.52 *m.*×2.22 *m.* to 6.16 *m.*×2.76 *m.* On the south-western corner of this building existed a rectangular underground structure (no. 26c), measuring 2.64 *m.*×1.80 *m.* No entrance either to the building or to any of the rooms was found, except the central pillared hall which was approached from both the north and the south. The whole plan of the house suggests that it was built on the *Chatuḥaśāla* pattern.

The central pillared hall (pl. X) contained two small rectangular brick-lined pits, numbered 1 and 2. Pit 1 measured 0.76 *m.*×0.64 *m.* and the pit 2, 0.70 *m.* × 0.62 *m.*, having a depth of 0.64 *m.* and 0.70 *m.* respectively. Both these had *puccā* floors made of brick jelly. The roof of the hall was supported by nine masonry pillars. The remaining three pillars supported the roof of a verandah or a porch on the eastern side. A passage 1.60 *m.* wide on all the four sides of the hall separated it from the outer enclosure. The position of this central hall is not in harmony with the square enclosure containing rooms of different sizes on the outer side. It does not appear, therefore, certain that the pillared hall and the construction around it were originally planned as a single unit. Identification of the pillared hall as a temple, proposed by Krishna Deva was based among other things on the assumption that the two formed part of a single homogenous unit.

1. Deva, Krishna, 'Excavations at Rajghat Near Benares,' *op. cit.*, pp. 41-51. According to Krishna Deva it was most probably a temple which 'is shown by the passage around the whole building which was probably used as circumbulatory path, as also by the peculiar disposition of the apartments, all facing the *maṇḍapa* or the central Hall supported on 12 pillars. The sanctum of the temple stood on a relatively high plinth in the north, while the apartment on the remaining sides appeared to have been intended to house subsidiary deities or even the ministering priesthood. The south-western corner of this building has a cesspit which was obviously designed to receive the sullage and refuse of the temple including the stale discarded offerings."

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As stated above, this assumption has no definite basis. Moreover, the plan of the pillared hall together with its enclosure does not confirm to any known plan of the temples of the period. It may also be pointed out that a temple is constructed on a ground which is free from earlier constructions. This was not so in the present case. Under the circumstances, identification of the pillared hall with a temple is doubtful. Judging by the plan and nature of construction, we can only suggest that this complex was connected with a public purpose, serving the interests of a community. In this context, we may draw attention to some other constructions brought to light during 1977-78 clearance in the hope that they may help in determining the nature and purpose of the complex as a whole.

An adjoining contemporary complex (31, 31a 31b, 31c, fig. 9 also pl. IX) is situated to the east of the remains described just above. This is comparatively of smallar dimensions and built in the east-west orientation. It comprised three rooms (numbered 31, 31a and 31b) and a long verandah (numbered 31c), measuring 1.50 *m.* from north to south and 15.05 *m.* east-west. Of the three rooms, the two one each in the western (numbered 31) and the eastern sides (numbered 31b), are comparatively smaller in size, measuring 3.16 *m.* × 2.64 *m.* and 3.16 *m.* × 2.72 *m.* respectively. While the width of the central room remained more or less the same as noted in the case of other rooms, it had a length of as much as 7.96 *m.* in the east-west direction. There is no indication to suggest how the rooms and the verandah communicated with each other. Regarding the access to the house, nothing definite is known. It might have been towards the road side. Related to this were the two spacious open courtyards (numbered as floor 12 and 12a), situated very close to this building on the northern side. The larger one (floor 12) measured 16.48 *m.* from north to south by 20.12 *m.* from east to west, while the smaller one measured only 8.40 *m.* × 4.52 *m.* Both were paved with bricks, the traces of which can be seen in the illustration (fig. 9 also pl. XV). It is interesting to note that several post-holes were sunk in the brick paved floor of the larger courtyard here and there. Their irregular position, however, did not help much in reconstructing the plan. It seems likely that this spacious courtyard contained some temporary structure, the roof of which was resting on the posts. On the southern end of the smaller courtyard was found a brick-built drain 10, running east-west and north-south join finally to the massive drain 9, running in the east-west direction (see pl. XVI). Obviously, they were meant to clear the rain and refuse water. The larger courtyard was approached perhaps either from the eastern or the northern side and the smaller one might have had its access either on the western or the northern side or both. The two courtyards were enclosed with in boundary wall.

It may be suggested that the three rooms, a verandah and the two courtyards, as described above formed one complex. It is not certain as to how this entire complex was used. However, this much is clear that it was not an ordinary

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residential house, and, if the adjoining house numbered 26 was used by some official or person of high status, this attached complex (31, 31a, 31b, 31c) might well have been used by other functionary attached to the chief. The associated two spacious courtyards might have been used for some social or commercial gathering.

The third contemporary building (fig. 9, 27-27j) was situated to the south of the two complexes referred to above, and on the other side of the road. In view of its position we may suggest that the front of this building was overlooking the road and its back faced the river Ganga. The building consisted of only a series of rooms, built in a row in the east-west direction, parallel to the road. It had more than eleven rooms, varying in sizes from 5.64 *m.* × 3.34 *m.* to 2.24 *m.* × 3.34 *m.* The width of the rooms in all the cases remained the same (*i.e.*, 3.34 *m.*) and the difference was only in regard to their length.

These rooms, built in a row on the southern fringe of the mound and overlooking the road, probably served as shops rather than the dwelling purposes. This view is mainly based upon the ground that none of the rooms was found interconnected, nor there was any trace of other structural activity associated with it.

(*b*) *Underground Structures* :

The excavations brought to light the existence of thirteen underground structures. Their presence in such a large number and, concentration in one particular area (see fig. 16 and pl. XVII) is somewhat of an enigma. Out of these, three (8d, 8e and 26c see figs. 4 and 9) were brought to notice in the earlier diggings, while the remaining ones were exposed during the session 1977-78. Located mostly on the river side near the Ganga, these underground structures were of varying dimensions and depth. They were situated in close proximity of the above buildings, discussed in the preceding pages. The method of construction was simple—a pit mostly rectangular or in an instance square on plan was dug upto the required depth and was then lined by burnt bricks. Some of these were made of complete bricks, while in the construction of others both complete and broken bricks were employed. A lone example (*i.e.*, underground structure 6), however, was built exclusively of brick-bats. An important feature noted in their construction was that their sides tapered downwards, with the result they were broader at the top and narrower at the base. Many of these structures were provided with holes at regular intervals in the side-walls, either on the two or all the four sides. The number and arrangement of these holes depended mainly on the demensions and the depth of the structures. These holes were transverse and were provided at the time of construction, but, in a single case (*i.e.*, no. 26c), some of the top holes were made after the construction of the structure. It is difficult to suggest definitely the purpose of these holes. It may, however, be proposed

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that they were meant for the placement of wooden beams, possibly for an easy access to the bottom. Alternatively, they might have been used for placing planks with a view to dividing the underground structure into several cpmpartments. This presumption is strengthened by the fact that such structures as were of a smaller depth, in which people could descend and come up without any help, did not have any holes. Again in case of the rectangular structures where one side was unusually long in the case of the underground structure 4 it was as much as 13.50 *m.*, the holes were altogether absent on the shorter axis.

Among other features of these structures, mention may also be made of the fact that a majority of them had a floor at the botton, which was made of rammed earth mixed with potsherds or brick-bats, or was paved with bricks. All such structures have been classified into five main types which are as follows :

Type 1 : *Small Underground Structure Without Holes*

Sub-type (A) (fig. 9, pl. XVIII, B)

This sub-type is represented by the structure no. 1, which was square on plan, each side measuring 1.40 *m.* It had nearly vertical sides, and was characterised by a floor at the bottom made of brick-bats. Contents of the structure were not found, due to subsequent disturbance.

Sub-type (*B*) : (see figs. 7 and 15, pl. XVIII, A).

Two underground structures nos. 6 and 9 represent this sub-type. They were built in the similar fashion as the preceding one, but at the same time, differed from it on account of their rectangular plan. Unlike the preceding one, the floor at the bottom of the structure 6 was made of rammed earth, mixed with pot-sherds and brick-bats. Since the structure 9 was traced only upto eleven courses of bricks without reaching the base, the nature of the floor is not known. It measured 1.48 *m.* × 1.40 *m.* at the top. The structure 6, built of brick-bats only, was slightly bigger than the other, and measured 2.18 *m.* × 2.02 *m.* at the top and 1.96 *m.* × 1.84 *m.* at the base. It was 1.58 *m.* deep. As the sides of the pits were nearly vertical, the difference between the measurements at the top and the bottom was negligible.

Sub-type (*C*)

The examples of this sub-type nos. 8d and 8c (fig. 4) were also rectangular on plan, but the sides gradually tapered downwards, ending into a narrow base. In these structures the difference in the measurement between the top and the bottom was very marked (The structure 8d measured 1.98 *m.* × 1.70 *m.* at the top and 1.70 *m.* × 0.96 *m.* at the base), and they were comparatively also deeper (the depth of the 8d was 2.57 *m.*) than the preceding sub-type. Both the examples of the sub-

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type (C) were brought, to light in earlier excavation.[1] It is not mentioned by the excavators whether any of these had floor or not at the bottom.

Type 2 : Underground Structure With Holes

Represented by the underground structure 10 (fig. 17), this type hardly differed from the preceding sub-type 1 (C) in structural details. The length and the width of the available example measured 1.12 *m.* × 1.02 *m.*, respectively, while its total depth was 2.5 *m.* However, it distinguised itself from the preceding examples on account of a set of holes, measuring 12 *cm.* in length, in the two sides facing each other in the east-west orientation. The two holes, one each on the either side, were found below 13 courses from the top on the same level. According to our interpretation, a wooden beam was placed horizontally in these holes (fig. 18, Type 2).

Type 3 : Underground Structures of Larger Dimensions and Depth

The representative examples of this type are the underground structure 7 and 8 (fig. 7, also see pl. XIX, A, B), though the structures 2 and 5 (figs. 6 and 7 also pl. XX), which were found in a mutilated condition, have also been included in this group. The first two varied only slightly in respect of dimensions and depth, and they stood in perfect agreement with reference to their constructional features. Provided with floors of rammed earth and potsherds, the structures 7 and 8 measured respectively 3.20 *m.* × 1.72 *m.* and 3.42 *m.* × 1.58 *m.* at the top, and 2.58 *m.* × 1.4 *m.* and 2.97 *m.* × 1.24 *m.* at the base. The former was 3.85 *m.* deep, and the latter 3.22 *m.* The measurements of the other two structures Nos. 2 and 5 were 3.33 *m.* × 2.4 *m.* and 2.74 × 2.36 *m.* at the existing top, respectively, while the measurement was the same (2.68 *m.* × 1.78 *m.*) at the bottom in both the cases. The nature of the floors was the same as observed in the case of the first two.

Of these, the 7 and 8 were found in close proximity while the 2 and 5 were located at considerable intervals. All these were rectangular on plan. The significant feature of this group is the arrangement of holes on the same level in two sets, the upper and the lower. The upper arrangement comprised six holes, two each on the longer axis and one each on the shorter axis. The lower arrangement contained only four holes, one each on all the four faces. If the holes were meant for the placement of beams, their disposition in the case of the upper arrangement, suggests that the single wooden beam placed in the east-west direction, *i.e.*, on the shorter side of the structure, was supported by two others placed just below it in the north-south direction, *i.e.*, on the longer side of the structure. While in the case of the lower arrangement, only one beam supported the other one. It would appear that the placement of two beams in opposite direction in the upper arrangement might have been done with a view to strengthening the load bearing capacity of the

1. Narain and Roy, *op. cit.*, (1976), p. 42.

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upper beam and also to ensuring greater operational efficiency. The disposition of these holes perhaps also suggests that each set of beams was supporting a series of wooden planks, laid on them with a view to dividing the structure into three compartments (fig. 18, Type 3).

Type 4: Massive Underground Structure

The only structure representing this type is no.4 (fig.6) which distinguishes itself from the others on account of its unusual dimensions. In this case, the holes were made in the facing longer sides of the structure only. They were placed on the same level in three vertical rows at regular intervals (figs. 19 and 20a). Built on the same place, where an earlier imposing structure No. 43 with two wells in the centre stood (fig.6), the rectangular underground structure 4 impresses a viewer particularly by its massive size, with a measurement of 13.5 *m.* x 2.8 *m.* at the top and 13.22 *m.* × 2.5*m.* at the base, the downward taper of the sides being very slight. However, in contrast to the above measurement, the depth was only about 4.9 *m.* In view of the unusual length of the structure, obviously no provision was made for the lengthwise placement of beams. Like the preceding one, if the beams were meant to support the wooden planks, it was also divided into three compartments (fig. 21, Type 4).

Type 5 : Underground Structure with Unusual Depth

The underground structures 3 and 56c (figs. 6 and 9) represent this type. Both are rectangular on plan, and are smaller in dimensions in comparison to the preceding types 3 and 4. The structure 3 measured 2.46 *m.* × 1.72 *m.* at the top, and the other 26c, 2.64 *m.* × 1.8 *m.* None of them could be entirely cleared upto the base. The essential feature of these structures is their unusual depth, as much as more than 24 ft. in the case of 26c. Like others, they were also provided with holes in the facing walls on the same level, at regular intervals down to its base (fig. 20b). There is evidence to suggest that the structure 3 fell into disuse during the second structural phase of the period.

Interpretation of Underground Structures

The short description of the above five types, containing as many as thirteen underground structures, clearly shows that they formed a class by themselves and were certainly meant for some special purpose. However, in the absence of any definite archaeological evidence in the form of any identifiable contents of the structures or some precise context, capable of providing a clue to their interpretation, it is indeed very difficult to ascertain their function with any amount of certainty. The task of determining their purpose becomes all the more difficult, when we notice that somewhat similar structures, unearthed at several other sites of the sub-continent, like Kauśāmbī, Śriṅgverapura, Kapilavastu, Fazilnagar, Bangarh,

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Ujjain, Arikamedu, Khairadit,[1] *etc.*, have been variously interpreted by different excavators. It may be noted, however, that none of these sites has yielded such a large number and variety of the underground structures as at Rajghat. Thus, the structures, found at Kauśāmbī and Arikamedu (pl. XXI) are more or less similar to our Type 1, and, according to Sharma, the excavator of the former site, they could have been used as septic tanks or the receptacles for the dry refuse.[2] On the contrary, Wheeler thought the two structures of Arikamedu referred to as Lined pits A and B,' served the purpose of tanks, used for dyeing the muslin.[3] considering, their small size, location, and the absence of any positive evidence inside the pits, the constructions of the Type 1 of our site, which were not found associated with any drainage device, can hardly be interpreted in the light of the above two suggestions.

To the best of our knowledge, underground structures, comparable to the Type 2 of our site have been reported only from Khairadit (see fig. 22 also pl. XXII) and resembles the Rajghat example in major details. It measured 1.54 *m.* X 1.40 *m.* at the top and was 2.68 *m.* deep. The structures, some-what similar to the examples of the Type 3 of Rajghat, were excavated atleast at three sites, *viz.*, Kapilavastu, Kauśāmbī and Khairadit[4] (pl. XXIII). The one reported from Kapilavastu[5] (pl. XXIV, A) resembles the Rajghat Type 3 in view of its dimensions and the mode of construction. But the two also differ from each other at least on two counts, *viz.*, the absence of any indication of holes in the former and the variation between the two in the manner of construction of the floors. (The Kapilavastu example is brick paved, while the floor is invariably made of rammed earth at Rajghat.) While at Kapilavastu 'ritualistic affiliation'[6] has been suggested

1. The site is situated on the right bank of the Ehaghra in the Ballia district (U.P.). It is being jointly excavated under Prof. K.K. Sinha and the author, under the auspices of the department of Ancient Indian History Culture and Archaeology, B.H.U. The three reasons (1981-1983) work at the site brought to light four underground structures of varying dimensions and depth, assignable to Kushāṇa and Gupta period. These structures are comparable to the Rajghat types 2, 3 and 5 in view of its dimensions, the mode of construction and disposition of the holes. The excavators one of the view that they were meant to stone grains or some other commodities. It is interesting to note here that in one such structure remains of charred grains were also found.
2. Sharma, G.R., *op. cit.*, (1969), p. 35.
3. Wheeler, R.E.M., Ghosh, A., and Deva Krishna: 'An Indo-Roman Trading-Station on the East-Coast of India,' *AI* no. 2, (1946), p. 27. He strengthens his view by suggesting the present use of the masonry tanks for similar purpose in south India, p. 34.
4. Out of the four underground structures found at khairadih, the one resembles the Rajghat Type 3 in view of its structural details and in the manner of construction of the floor. However, it differs slightly in disposition of the holes. The structure was used in two succeeding periods (Kushāṇa and Gupta).
5. Srivastava, K.M., *Kapilavastu in Basti District of U.P* , Nagpur, (1978), p. 5, pl. XI.
6. *Ibid.*

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with reference to the structure, no such association appears possible in the case of the Rajghat examples, as no evidence of any kind was found in support of this. The three under ground structures found at Kauśāmbī (pl. XXV) seem to share some of the characteristics of the examples of Rajghat. However, they are also characterised by three such features as the structures of our site do not contain. They are as follows: (1) they were provided with an offset of ledge after every 14 or 16 courses; (2) at the level of each offset, a set of two holes, one each on the two shorter sides of the rectangular structure, was made. The holes are not located, however, exactly in the centre. According to the excavator, the ledge and the holes helped in periodical cleaning. (3) In one case, a drain was also found associated with the tank in such a manner, as it would discharge itself into it.[1] These are also the septic tanks of the receptacles; of dry refuse, according to the excavator of Kauśāmbī.[2] But, we cannot assign similar uses to the Rajghat structures in view of the total absence of the associated drainage, and the presence of some such distinctive features, as may lead us to some more plausible interpretation.

An underground structure with brick-paved bottom, but comparatively smaller in size than the Rajghat example of the type 4, was also found at Ujjain. However, it belongs to a much earlier period. According to the excavator, it was a reservoir.[3] However, we find it rather difficult to apply interpretation on the underground structures of the Type 4 from Rajghat, particularly in view of their unplastered walls and the presence of different sets of holes at various levels in them.

Regarding the occurrence of such structures, as included in the type 5 of Rajghat, at other places, we may draw attention to their presence at Śṛiṅgverapura[4] Bangarh,[5] Fazilnagara[6] fig. 23) and Khairadih (fig. 24). To the best of our knowledge, the structures found at the above mentioned first three places are devoid of any arrangement of holes. Otherwise, they seem to be sharing the remaining features of the Rajghat structures. The lone example of Śṛiṅgaverapura has been identified as a soak-pit, since some greenish moss was noticed on the pots and the base of this structure. Regarding the Bangarh structure, the excavator suggests that "it was a pit or a *kuṇḍa* probably used for depositing the used flower,

1. Sharma, G.R., *op. cit.*, (1969), pp. 35 and 38-40, pl. XVIII.
2. *Ibid.*
3. *IAR*, 1955-56, pl. XXVII A; also *IAR*, 1955-57, p. 27, pl. XXX B.
4. Information about the structure was kindly supplied by Shri D.K. Sinha, of the Archaeological Survey of India, when he paid a visit to Rajghat on March 5, 1979, alongwith the students of the School of Archaeology.
5. Goswami, K.G., *Excavations at Bangarh*, Calcutta, (1948), pp. 10 and 35, pl. XV (b).
6. Information kindly provided by Prof. V.S. Pathak, Head of the Department of Ancient History Archaeology and Culture, Gorakhpur University. The site is being excavated by Dr. S.N. Chaturvedi of the same University.

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etc., of the worship."[1] The excavator of Fazilnagara is also inclined to associate the underground structure of his site with some ritualistic purpose. The evidence for moss at the base of the structure, as noticed at Śṛiṅgaverapura, does not appear at our site. The other two suggestions are rather hypothetical, and require further confirmatory evidence.

With reference to the above interpretations made by various archaeologists in respect of the underground structures appearing at their sites, it may be noted that seme of them are mainly based upon the circumstantial evidence, but a few are also more or less conjectural. For obvious reasons, they hardly help us in arriving at a definite conclusion. It may be emphasised, however, that while considering the question of the probable use of the underground structures of Rajghat, it is worthwhile to keep atleast some of their basic features in mind. They are as follows : (1) The walls were mostly unplastered, though, in the case of the structures 7 and 8, the existence of a sort of mud plaster was suspected, (2) usually the floors were made of rammed earth and potsherds, and rarely of bricks. (3) The structures belonged to five different types, but almost all of them were located in a small area, close to the river Ganga. (4) Except those which were not very deep, all the others, whether big or small in dimensions, contained holes on the facing walls at a definite level, the number of holes being different in accordance with the size of the structures. (5) None of the underground structures appeared to be connected with any of the small residential houses of the area. (6) Since all of them were badly disturbed during the railway diggings of 1940, the contents of the underground structures do not help in any way to solve the problem of their identification.

When it was realised that neither the archaeological contexts nor the opinions of various scholars were capable of providing any definite clues to the explanation of the underground structures, we searched ancient Indian texts in the hope of finding some references, which could help interpreting them. We did not come across any reference in the contemporary literature of the Gupta period, but, fortunately for us, there is an interesting description of the construction of a store house of grains in the Arthaśāstra of Kauṭilya. It reads as follows: "Having dug up a square well, not too deep to be moist with water, having paved both the bottom and the sides with slabs of stone, he shall, by using strong timber, construct in that well a cage-like underground chamber of three storeys high, the topmost being on a level with the surface of the ground, with many compartments of various designs, with floor plastered with small stones, with one door, with a movable staircase and solemnised with the presence of the guardian deity."[2]

1. Goswami, K.G., *op. cit.*, p. 10.
2. Samasastry, *op. cit.*, p. 55.

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According to Kauṭilya, the store house of grains along with the treasure-house and the trading-house was looked after by a special officer called *Sannidhātā*.[1]

It is clear from the above reference to Kauṭilya that the grain was stored in deep pits, which were divided into various chambers and small compartments with the help of timber. Interestingly, this description of the store house agrees in many respects with the underground structures of our site. As per our interpretation, the different holes at various levels of the structures were meant for placing wooden beams, which in turn were overlaid by a number of wooden planks, close to each other, with a view to dividing the structures into different compartments. The main difference between the two lies in the fact that the structures of out site are brick-lined, while Arthaśāstra recommends the use of stone slabs for paving their walls and the bottom. However, this distinction is only minor in nature, and does not detract us from deriving the obvious conclusion that the Rajghat underground structures show remarkable agreement with the description of the store-house of grains, contained in Arthaśāstra. In the light of this similarity, can it be suggested that these structures of Rajghat were actually meant to store grains ?

Our tentative identification gets further support from the present day practice of storing grains in deep pits, prevalent in Madhya Pradesh[2] and at least in two regions of Uttar Pradesh, *viz.*, the adjoining Jaunpur district[3] and the Lalitpur district of Bundelkhand.[4] According to the available information, in both the

1. *Ibid.*
2. In Madhya Pradesh four methods one in vogue of storing grains, out of which *bundās* are "generally used for storing large quantities of grain, mainly wheat. *Bundās* are circular type underground pits generally dug on a high level ground in the open. They are about 1.37 to 1.98 metres deep with diameter varying from 3.65 to 4.57 metres. The inner wall of a *bundā* is plastered with mud or made of bricks plastered with mud. In some cases, cement plastering is also done. The ground floor of a *bundā* is well-plastered with about seven centimetre thick layer of mud. After drying, it is plastered with cow-dung.

   For storing grain, one layer of about 30 *cm.* to 45 *cm.* of wheat *bhusā* is spread uniformly at the bottom floor of the *bundā*. This layer of *bhusā* is than properly covered with dried teak leaves.

   Well-dried grain is filled in the *bundā* leaving a space of about 23 *cm.* all round the well. This blank space is also filled in with wheat straw using teak leaves or matting of tender leaves for separating the two layers of grain and straw. This layer of straw is used mainly to protect grain from dampness in walls or on the floors. After filling the *bundā* completely, the grain is again covered well by the leak leaves or tender matting, and about 15 *cm.* thick layer of wheat straw is spread over it."

   Randhawa, M.S., et al, *Farmers of India*, Vol. IV, Indian Council of Agricultural Research, New Delhi, (1968), pp. 58-59.
3. Information was kindly supplied by Dr. R.A. Pathak, Purāṇa Section, Department of A.I.H.C. & Archaeology, B.H.U.
4. Information was kindly provided by Professor J.N. Tiwari, Department of A.I.H.C. & Archaeology, B.H.U.

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regions, circular pits, having 1.5 to 2 *m.* diameter, are dug for the purpose upto a depth of 6 to 10 *m.* The sides are then plastered with cowdung. Before putting the grain inside the pits, a thick cushion of straw is placed at the bottom as well as the sides. In the Jaunpur region grain is directly poured in the pits, while in the Bundelkhand area, bags containing grains are placed in them instead. Besides, the pits of the latter region are adequately sealed at the top, first by placing wooden planks, and then by a layer of earth mixed with straw. In the other region, a platform is raised around the pit, which is simply covered by straw.

The above mentioned present day practices of storing grains in pits may be regarded as a continuation of the ancient custom, to which an explicit reference has been made in Kauṭilya's Arthaśāstra, and of which the underground structures of Rajghat appear to be the material examples. The tradition of storing grains in some sort of structures was also known to the early Buddhist literature, as is evident from the word '*Dhaññāgāra*.[1] According to jātakas, the merchants (*Seṭṭhis*) sometimes used to stock huge quantities of grain in their granaries.[2] But, the Buddhist literature unfortunately does not provide relevant structural details of these granaries. The Jain texts also give information about various types of grain storage. The most common type of a grain store-house was made by piling the rings made of straw on the floor, plastered with cowdung. According to the Jain literary tradition, "grain was stored in *catussāla Avaparaka* (which was made of bricks) and *Koshṭhaka* (Hindi *Kothāra*) made of earthen work."[3] However, the Jain literature also does not describe any such grain store-house, which may be favourably compared with the underground structures of Rajghat.

Epigraphic confirmation of the existence of storehouses for grains (*Koṣṭhāgāra*) comes from Mahāsthāna (Bogra district; Bangla Desh) fragmentary stone inscription and Sohagaura (Gorakhpur District, U.P.) bronze inscriptions, both of C.3rd century B.C., although here again there is no clue to the architectural from of the houses.[4] Nevertheless, the textual and epigraphic references, cited above, are sufficient to bring home the point that there was an ancient practice of storing grains in well constructed granaries, in which sometimes a huge stock of grains was

1. *Pali English Dictionary* (Pali Text Society). ed. by Rhys Davids and Stede, London, (1966), *Dhaññāgāra*, a store house for grains, S.V. *Dhaññāgāra*. Pālī literature uses *Koṭṭhāgāra* (Sanskrit *Koṣṭhāgāra*) in the sense of granary. *PED*, S.V. *Koṭṭha*.
2. Bose, A.N., *Social and Rural Economy of Northern India*, Vol. II, Calcutta (1967), p. 10.
3. Motichandra, 'Architectural Data in Jain Canonical Literature' *op. cit.*, p. 69.
4. See Sircar, D.C., *Select Inscription*, Vol. I, pp. 79-80, and 82-83, Sircar has rendered *dave Koṭhagalani tighavani*, of the *Sohagaura* inscription as *dvau Koṣṭhāgārau trigarbhau* and regards *trigarbha* as synonymous with *tritala, i.e*, of three storeys, which, however, is uncertain. Bühler had translated the expression as 'two store houses with three partitions.' But it is equally uncertain whether there is any suggestion, here of an underground store house. It should be noted that there has been some difference of opinion even about the reading of *tighavan.*

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piled. This may lead us to infer that at some of the ancient Indian centres, there was not only a large number of granaries, but a few of them could have been quite massive in size or fairly so. Ancient Varanasi might have been one such centre during the Gupta Period.

Considering the above mentioned ancient traditions, the present day practices popular in some regions of Uttar pradesh, the location and the structural features of the underground structures of our site, it will be fairly reasonable to identify them with the store-houses for grains. However, the possibility that some other commodities were also occasionally or regularly stored in them, cannot be altogether ruled out, although there is hardly any direct or indirect evidence in support of such an assumption. It is likely that the various compartments of the underground structures were piled by different types of grain, so that they could be taken out separately, in accordance with the requirement, without much difficulty. Alternatively, it may be suggested that each compartment stored grains of a distinct owner. It may be recalled that one of the important features of the underground structures of ancient Varanasi is their location on the river front of the Ganga (see fig. 16). Incidently, it may be mentioned that both at Mohenjodaro and Harappa the granaries were located near the river banks. It is interesting to note that as many as eleven out of the total of thirteen were located in a small area, close to the river Ganga, and none of them seemed to have formed part of any private residential building. The solitary underground structure No. 26c was found located within a complex, which, in view of its plan and dimensions, appears to be a public building. It is not unlikely that they were constructed either by a central authority or by some corporate body, as it was rather difficult for an individual to have constructed them in such large numbers. In view of a sizeable number of the underground structures and their close proximity of the river Ganga, it may be inferred without much hesitation that Varanasi was a great trading centre, particularly for grains, during the Period IV, and a bulk of this trade was transacted through the river route. The grain merchants, known as *Dhaññika*, have been occasionally referred to in the Buddhist literature.[1]

It may be recalled that an imposing building complex No. 26, with an elaborate *Chatuḥśāla* plan and large dimensions, which was mistakenly identified as a temple earlier,[2] was found in close proximity of the underground structures (see fig. 9). Since both are contemporary, presumably having the same working level, we may not be very wrong in suggesting that the underground structures and the massive building complex were not entirely unrelated to each other. If this assumption is regarded as valid, it is probable that the building might have served

1. For details, See Bose, A.N., *op. cit.*, (1967), p. 2.
2. Deva, Krishna; 'Excavations at Rajghat Near Benares,' *op. cit.*

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as the office or the office-cum-residence of the authority, responsible for the management of stores or the ware-houses, represented by the underground structures. It appears quite pertinent to recall here that Kauṭilya refers to an officer, named *Sannidhātā*, who was incharge of different stores. Reference may also be made to the occurrence of a sealing with the legend *Koṣṭāgārikana*, meaning 'chief of the officers of royal stores,'[1] although it is assignable to a slightly earlier period on palaeographic grounds. Whether the adjoining imposing building belonged to the incharge a stores and warehouses or not, the occurrence of such a large number of the underground structures certainly points out to the commercial and trading activities of ancient Varanasi, although, in view of its massive structures and a large variety of beautiful objects, the economic prosperity of this place during the period under discussion has never been in doubt. The presence of the '*nigama*' and '*śreṇi*' sealings may be cited as an additional evidence in this respect.

Well

Like the preceding period, drinking water was obtained from the *puccā* wells as well as the rivers even in this period. The draw-wells were constructed in the earlier period mostly within the house-complexes, and thus meant for a restricted use. A change is noticed in this period, as now we see the occurrence of a massive brick well, which must have been used by community as a whole. It was built in a stepped fashion—the inner diameters measured 2.35 *m.* and the outer 7.76 *m.*[2] A noteworthy feature of the structure "was the use of uprights in the second step (form the bottom), where two post-holes in a line were also observed."[3] The well was excavated upto a depth of twenty-two courses without reaching the bottom. An interesting feature of the well was its lime-plastered inner surface, preserved in a small part of the structure.[4] Its massive size and elaborate construction indicates that it was a public well, and thus it can be regarded as an important civic amenity. Such wells might have been built in different parts of the ancient city with a view to facilitate the supply of drinking water to those inhabitants who did not have their own draw wells. It is interesting to note that draw-wells with a similar purpose are constructed even today.

1. Agrawala, V.S., *INSI*, Vol. XXIII, p. 413.
2. Narain and Roy. *op. cit.*, (1976), p. 31. Since the structure was only partly exposed during the session 1965-66, it was then tentatively identified as a stūpa. The mystery was cleared during the excavations of the succeeding session 1966-67 only, when it came out to be a massive well. Unfortunately, the report did not modify the view, and referred to the structure as a stūpa, ignoring the obvious fact that the *stūpas* were generally not constructed within the city complexes.
3. *IAR*, 1965-66, pp. 54-55.
4. *IAR*, 1966-67, p. 44.

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Drainage System

During this Period an important change was noticed in the drainage system at this place—the ring-wells and the perforated soakage jars of the preceding period had now gone out of vogue and they were substituted by brick-built drains. Among the civic amenities available to the masses, mention may be made of the occurrence of public drains, numbered 9 and 5. Of the two, the drain 9 was oriented east-west and was available upto a length of 23.16 *m.* It had a gradual slope towards the west, and the drain presumably discharged itself in the Ganga. The channel of the drain had unequal width, which ranged between 40 and 56 *cm.* Similarly, its side walls were also not of a uniform width. Considering the width of the channel walls, it may be presumed that these might have been used also as passages. The drain 9 was meant possibly to serve the complexes numbered 26, 31, 27, the two courtyards, *etc.* (fig. 9).

The other drain 5 (fig. 10) traced upto the distance of 9.25 *m.* only was also not built symmetrically, as the channel and the side walls were not of uniform width. The width of the channel ranged from 30 to 50 *cm.* In the case of the two side walls, the width of the northern side ranged between 50 and 80 *cm.* and that of the southern measured uniformly 85 *cm.* Its starting point is unknown, but it is clear that its flow was towards the eastern direction, *i.e.*, roughly towards the Ganga. While the public drains, like the ones mentioned above, were in the nature of community services, the position about the domestic drains is not so definite. Occurrence of drains with smaller channel openings in the house-complexes has been noted, but their exact correlation with the house—complexes could not be established.[1] Under the circumstances, both the alternatives are possible—these could be truely house drains, or they could be branch drains joining the main drain.

Roads and Lanes

It may be stated at the outset that the evidence for roads and lanes are rather incomplete, due to extensive disturbances. From the available data, we can only suggest that the city had a sizeable number of roads and lanes, although their actual number and layout are yet to be precisely revealed. In the limited clearing work of the session 1977-78, the evidence for five lanes (1-5) and two roads (1-2) were found in different parts of the mound.

Of these, the road 1 (fig. 15) was oriented north-south and its width towards the northern available end was 5.76 *m.*, while on the southern and it was only 4.72 *m.* With buildings standing on its either side, this road could be regarded as one of the main thoroughfares, which ran presumably through the heart of the

1. Narain and Roy, *op. cit.*, (1976), pp. 39, 55, 61, 66 figs. 3, 10 and 13.

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city. There were also side lanes similarly lined by residential houses. They were either leading to this road or ran parallel to it. Of the three, the lanes 3 (2.40 *m.* wide) and 5 (1.68 *m.* wide, fig. 15) were found joining this road 1 and ran east-west. The width of the lanes also was sufficient for the use of by small sized carts.

The other lane 4 (fig. 15) was noticed between two houses 57 and 58 at a distance of 3 *m.* from the Road 1 on the eastern side, and running parallel to it. This lane 4 finally joined the lane 3. It was less wide (1.04 *m.*) in comparison to the other two, and might have been used as a passage by the pedestrians only, as it was too narrow even for small vehicles.

The other two lanes 1 and 2 (fig. 14) were noticed in another part of the mound. The maximum width of the two lanes has been reported as 66 *cm.* and 60 *cm.* respectively. Both were oriented north-south. Of these, the lane 1 ran between the houses 7 and 8, while the lane 2 separated the houses 8 and 9 from each other. These lanes are narrower, and could have been used only as passages between the houses.

Another road 2 (fig. 9) was laid in the east-west orientation, along the river Ganga. It was flanked on one side by the massive buildings numbered 26 and 31 and on the other by a range of rooms (shops) built along the line of the road. Its available length was over 44.96 *m.* and its maximum width 2.70 *m.*, but this was not maintained throughout the length, as it measured only 1.78 *m.* on the eastern end. It was perhaps built by using small brick bats thoroughly rammed with clay, traces of which were noticed at a few places. In the present state of our knowledge, it is not possible to ascertain whether it was also one of the main thoroughfare like the other one, numbered 1, or it was a sort of service-road specially meant for the ware-house complex, whose buildings stood on either side of the road 2. One can only guess at the possibility of this road ultimately joining the main road 1.

The road 2 was partially blocked by the construction of a massive drain 10, sometime during this period—the precise structural phase could not be ascertained. We are unable to understand what promoted the people to construct the drain, and thus block the passage. In this connection, recalling our suggestion made earlier, it may be held that the top of the side walls of the drain could have been used as passage, when the road 2 could not serve this purpose.

The above evidence, though fragmentary, indicate a regular lay-out of the city during the Period IV. Considering all the factors, it is supposed that the city during the period might have been divided by many wide roads and lanes, although one finds difficult to present any general plan, due to the limited nature of work at the site. From the above study, it is also clear that the complete house complexes

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are very few, and the several disconnected wall foundations do not help much in reconstructing the settlement pattern. However, the continuation of the earlier noted two varieties of houses of the preceding Period III could be confirmed. On the basis of the evidence available, it may be mentioned that an average house consisted of two, three or more rooms of varying sizes, all built in a row. Such houses, whan consisted of only two small rooms, were provided with a brick-paved floor in front (fig. 13B), but when they did not contain any courtyard, the rooms were comparatively spacious (fig. 14). The houses had kitchen-rooms, which were provided with ovens and a brick paved platform for placing the articles of daily needs.

The rooms in the houses were provided with doors, having a single or a pair of leaves, depending upon the width of the opening. The doors used to be closed and secured by means of door-chains, mada of iron. The door leaves were further furnished with door rings and door-bosses as decoratives, presumably at the joints. Some actual specimens of these items have been found in excavations (pl. XXVI, B, 3).

Excavations conducted during the year 1977-78 and earlier have brought to light sufficient evidence to suggest that the civic planning in ancient Varanasi during the Period IV was of a high order. The township was well provided with an elaborate drainage system with arrangements for taking out refuse water both from residences as well as the public buildings. The city was also well served with wide roads, from which branched off several lanes. The houses overlooked the roads and lanes. During this period, the ancient township could boast of one more possession in the form of a very substantial building-complex, consisting of several underground storages together with the residence and office of the high functionary of the stores. If the presumption made in the preceding pages is correct, it may indicate that ancient Varanasi was a flourishing centre of trade and commerce.

Resumé

Although the settlement in ancient Varanasi began as early as around 800 B.C., it is only in the Period II, beginning in Circa 600 B.C., that tangible remains of structures appear for the first time. The period witnessed the construction of a massive mud rampart and a moat around the habitation. The growing political importance of Varanasi as the capital of the Kāśī *Janapada* in sixth century B.C., probably necessitated the construction of this defence device. From quite an early phase of the Period II, the people of ancient Varanasi started showing a particular awareness to the needs of civic sanitation, as seen in the form of unlined drains and a number of soakage pits. Once started, the sanitary arrangements were further developed in the succeeding phase by lining the vertical

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pits with terracotta rings. However, in spite of the elaborate sanitary arrangements, the inhabitants during the entire Period II lived in small huts with thatched roofs.

The use of burnt bricks in constructions started rather suddenly from the Period III, beginning in Circa 200 B.C. Naturally, the structures of the early phase were rather modest in plan and construction. But the late phase of this period witnessed a remarkable all sided growth in the structural activities. Varanasi had now developed into a well planned city, having small and big houses, separated from each other by various roads and lanes, an efficient civic sanitary device, and several other features, which one normally expects to find in a prosperous urban centre.

The structural activities of the succeeding Period IV were no less significant than those of the preceding period, and the evidence, acquired during our excavations in 1977-78 at the site, are indeed sufficient to negate the mistaken assumption of earlier excavators that the "Period IV dated from Circa 300-700 A.D. was known for less structures."[1] Besides continuing the structural traditions of the earlier period with necessary modifications, this period of ancient Varanasi is also credited with constructing an impressive and peerless trade-and ware-house complex.

1. Narain and Roy, *op. cit.*, (1976), p. 31.

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3

Utensils

In this chapter an attempt has been made to discuss the functions of different variety of utensils used by the ancient people of Varanasi during the various periods under review. Among the materials of utensils, the clay was most extensively used in all the periods. Others were copper and stone, which were noticed in a very low frequency. Besides, some other materials like wood, leather and shell of fruits might have also been used for making vessels for daily use, but, due to their perishable nature, archaeological evidence is lacking. Their possible use is surmised on the ground that all these are still used in pot making.[1] The Jain[2] and the Buddhist[3] literature, too, provide a list of materials which were employed in pot making. Of these, only the earthen vessels offer an opportunity for a detailed study; the rest are so meagre that no generalization appears to be possible.

The pottery is generally considered by the archaeologists as the primary cultural material, and it is in this light that prime importance is attached with the study of this cultural equipment. The archaeologist studies pottery mainly with a view to identifying the cultures and to establish the chronological sequence of sites. However, except Sankalia,[4] who has attempted in his short article to discuss the functional significance of vessels of the earlier periods along with other objects, no serious attempt in this direction has yet been made. Sometimes the excavations reports of the Deccan College also made some casual references to the functional interpretation of the vessels. Therefore, the main emphasis has been laid in this chapter on

1. Wooden vessels in this region are used mostly in the form of a basin, termed as '*Kaṭhavata*.' The leather is used for storing oil and water. The *Kuppī* is the term used for the former while the *maśaka* is for the latter. The shell of fruits are normally used by *sādhūs* of the present day.
2. According to *Āchārāṅga sūtra*, a wide variety of materials was used in pot-making *viz.*, iron, copper, lead, silver, gold. glass, tin, brass, pearl, bell metal, horn, ivory, stone and leather. Deo, S.B., 'Pots and Utensils from Jain Literature,' *BDCRI*, Vol. XIV, No. 1, (1952-53), pp. 33 ff.
3. Only three kinds of pots were permissable for the use of monks, *viz.*, bronze pots wooden pots, made of shell of fruits *Mahāvagga*, VI, 14.2.
4. Sankalia, H.D. 'Functional Significance of the O.C.P. and P.G.W. Shapes and Associated Objects,' (ed.) Thapar, B.K., *Purātattva*, No. 7, pp. 47-52.

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the functional aspect of various pots, as the technique of their manufacture, the typology and the descriptive part have already been dealt with in detail in the Rajghat report.[1] But wherever, it was thought necessary, few details regarding the fabric and significance of the ware concerned have also been included. This is particularly true of the NBP of the Period II and the Red Polished ware of the Period III. It has to be admitted, however, that no functional interpretation of vessels is ordinarily possible, without being somewhat speculative in approach. This is because it is not always possible to gather information regarding the precise context of their occurrence and also because the specimens have not undergone minute scientific investigation. It is our experience that scientific examination of the inner lining of vessels may prove helpful in determining their function.

Besides the above, there is yet another difficulty-the pots might have often served more than one function. Examples in this connection may be given of the bowls and dishes, which will normally come under the broad classification "vessels used for consuming food-stuffs." But, during the course of study of pottery from Rajghat it has been observed that they might have been used for various other purposes, depending on their size and forms, *i.e.*, bowls could have been used variously as container, as lid-cum-bowl, as drinking cup, and as *kaṭorā* of the modern age. It was found here and elsewhere[2] also that some of these were used even for cooking purposes. Similar instances of different use may be given for vases as well. Before taking up the functional classification of the different vessels and a detailed discussion on them, it would be necessary to mention that some of the types might have more than one function. This appears especially true in the case of the pots, recovered from the Periods I and II. This aspect of problem has been studied in some detail by taking into account the variations in their diameter-height proportions. Findings of this study are being presented here for the Period I only.

Keeping in view their use, the utensils of each period are studied and classified as follows :

1. Cooking vessels
2. Vessels used for consuming food-stuffs (Eating vessels)
3. Drinking vessels
4. Serving vessels
5. Pots for storage purposes
   (A) Grains

1. Narain, A.K., Roy, T.N., *Excavations at Rajghat*, Pt. II, Varanasi, (1977).
2. Mehta, R.N., *Excavation at Nagara*, Baroda, (1968), p. 43, also Altekar, A.S., *et al.*, *Report on Kumrahar Excavations*: 1951-55, Patna, (1959), p. 71.

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(B) Water and other liquids like *ghee* or oil
(C) Other household and kitchen goods

6. Small containers
7. Flower pots (?)
8. Stone utensils for keeping some precious things and valuables.
9. Industrial utensils
10. Utensils of miscellaneous and indeterminate use.

Period I

The earliest people used only earthen vessels. It is important to note that no other material was employed by them for this article of daily use, in spite of the fact that the iron and copper were well known to them.

The pottery assemblage comprises four main types, *i.e.*, the red ware, the black slipped ware, the black-and-red were and the plain grey ware. Each of these has a few sub-types. The percentage distribution[1] of these wares suggests that the most frequent variety was the red ware. The others in the diminishing order were the black slipped ware (both plain and painted), the black-and-red ware and the plain grey ware. The main characteristics of these groups have already been discussed in detail in the report.[2] The prevalent ceramic industries indicate that three main techniques of firing were adopted for their manufacture, *viz.*, firing under oxidizing and reducing conditions, and inverted firing. It is of significance that special care was taken in regard to the surface treatment of the pots, produced by the last two methods.

All these, excluding the plain red ware, were confined mostly to the different types of bowls and dishes. The bowls varied considerably in size, ranging from the small *kaṭorī*-like specimens (black slipped, black-and-red, grey, and slipped red ware), the footed specimens (black slipped ware only) or the bowl-cum-lid (black slipped ware only) to a wide mouthed long container (black slipped ware only). The only exception was the black-and-red ware, which contained large basins, varying in diameter from 32.8 *mm.* to 49.9 *mm.* The height of these specimens could not be determined, as only their rim portions were recovered in the excavations.

The people during the period had limited types of vessels at their disposal. They were, bowls, dishes, vases and basins. However, they must have been

1. Our statistical data of the sherds of the total collection show that the red ware contributed nearly 36.4%, the black slipped about 31% and the black-and-red ware 16% in the Period I. The occurrence of the grey ware was nominal. Thus, considering the above results, the view) that "the black slipped ware was most abundant" (Narain and Roy *op. cit.*, (1977), p. 23,) appears to be incorrect and needs revision.
2. Narain and Roy, *op. cit.*, (1977), pp. 23-25.

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employed for many purposes, as is indicated by the existence of varying sizes in them. Out of the aforesaid forms, the bowls were subjected to a diameter-height correlation study, with a view to determining their possible functions. As a result of this study, as many as six groups in bowls have emerged, which are being discussed here under.

Group A

The specimens of this group range from 12.9 *mm.* to 22.4 *mm.* in diameter (the maximum limit is represented by a lone example in the black-and-red ware which has not been illustrated in the report) and measure approximately 9 *mm.* or more in height. Particular attention in this regard may be drawn to the specimens belonging to the black-slipped ware, which have everted or everted featureless or round rim-edge, sometimes with corrugated sides (fig. 25, 1, 3, 4, 14). Considering the diameter and height of these specimens, it is supposed that they served as containers for liquids or other commodities. But, their use as drinking vessel, specially of those which possess less diameter and can be handled with a single hand also cannot be ignored. However, looking at the large size and capacity of the majority of the vessels, it is more likely that they were used as containers.

Group B

Specimens belonging to this group range from 9.6 *mm.* to 12.4 *mm.* in diameter and from 6 *mm.* to 9 *mm.* in height, with their main concentration between 9.6 to 11.1 *mm.* and 6 *mm.* to 8.1 *mm.* respectively in diameter and height. They were probably the drinking bowls or cups, as these could be used conveniently with a single hand. However, the bigger specimens could also have served the purpose of containers as well may thus have served both the purposes. The specimens of this group have been noticed only in the black and the red slipped wares (fig. 25, 2, and 5).

Group C

This group consists of those wide mouthed shallow bowls, which are more in diameter and less in height. They range from 14.7 *mm.* to 22.5 *mm.* in diameter and from 3 *mm.* to 5.1 *mm.* (a lone example in the black-and-red ware represents the extreme limit) in height, with their main concentration being between 14.7 *mm.* and 19.5 *mm.* and between 3 *mm.* and 4.5 *mm.* respectively, in diameter and height. The specimens coming under this group occurred in all the industries, except the grey ware. Those in the black slipped ware contain concave sides, sometimes carinated towards the sagger base, with variants (fig. 25, 10-12). Their counterpart in the red and the black-and-red ware is marked by simple rim-edge, which is either everted, featureless or beaded (fig. 25, 38-40).

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Two possibilities in regard to their use can be conjenctured first, as a small dish for eating or serving purposes, and second, as covers for big jars.

Group D

Specimens belonging to this group may be compared with the present *kaṭorī* or *kaṭorā* and might have been used at the meal time, as is the practice even today The specimens under this group range in diameter from 13.5 *mm.* to 19.5 *mm.*, and in height from 1.5 *mm.* to 5.1 *mm.*, with their main concentration between 13.5 *mm.* and 18.0 *mm.* and between 1.5 and 4.5 *mm.* respectively, in diameter and height. They are found in all the slipped variety of wares (fig. 25, 31-34, also 6, 7).

Group E

The specimens of this group are represented only in the black-and-red ware, and they show remote similarity with the modern '*doṅgā.*' Their rims are splayed out, intended mainly to afford facility for the grip to lift the vessel at the required place. They are of varying size and capacity, and noticed in both plain and painted variety (fig. 25, 36, 41). The vessels made in the latter variety appeared to have been used on special occasions, as indicated by their limited number.

Group F

This group is represented by those specimens which are shallow in depth, and could have served normally as bowls, but also as lids, in view of the nature of their sides and the base (fig. 25, 9). These are noticed mainly in the black-slipped ware.

It is thus clear from the above account that a single type like bowl with varying dimensions could have served different purpose, probably on different occasions. Likewise, the dishes with saggering base could have been used as cooking pans, as suggested by the curvature of their base. It may, however, be admitted that soot marks are absent. Had they been used as *thālī* for eating purposes, it would have been difficult to place them on ground without the help of any stand or pot-rest, due to their saggering base. But no such evidence is available from the site.

In the following pages, we shall discuss the functional classification and details of the different kinds of vessels of Period I, keeping in view the categories mentioned earlier in this chapter.

Eating vessels

(a) Dish (*thālī*)

A fairly good number of fragments of this type was found from Rajghat. They

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give a fairly good idea of the size of the dishes. They were represented in all the industries of the period except grey ware. Such a vessel can be identified as *thālī* for taking daily meals, either dry or liquid. Numerically, the dishes of the black slipped ware predominate, suggesting there by their greater popularity among common masses. They were of varying sizes and forms. Three main divisions in regard to their sizes have been observed on the basis of the study of their diameters, *viz.*, small, medium and large. Of these, the diameter of first group ranges from 18.9 *cm.* to 23.7 *cm.* and they were probably meant for the use of children. All these have flat or flattish bases (fig. 25, 21-25, and 18), which would not require any support when placed on ground.

The specimens belonging to the second and the third varieties range in diameter from 26.4 *mm.* to 32.2 *mm.* Most of them were probably thalis, to be used by adults, except the dishes with saggering base, which perhaps served a different function, as explained earlier. One of the examples contains on the inner side of the base two wide concentric circles with a pointed knob at the centre. (fig. 25, 20). But, it is difficult to determine its use.

(b) Bowl (*kaṭorī* or *kaṭorā*)

Only those examples of bowls, which are comparable with the modern *kaṭorī* or *kaṭorā*, and had been included in the Group D earlier, come under the category of eating vessels. They have been found in a fairly good number. Their occurance in the black slipped ware is comparatively more. All these specimens have either incurved, convex, rounded or vertically straight sides (fig. 25, 6-12, 31-34). The last one is available only from Sarai-mohana,[1] designated as mound no. 3.

Drinking Vessels

The following three types could have served as drinking vessels.

(i) Stemed bowl

(ii) Bowls used as cups or tumblers

(iii) *Loṭā*-like vessels.

Of these, the first two are represented mostly in the slipped variety and the last in the ordinary red ware. The first is a footed bowl, with flattened base and hollow stem. The complete from has not been recovered from this place or from any other site. But when reconstructed, the shape may resemble with that of a wine cup. Similar specimens have been reported from Prahladpur[2] also. In view

1. *IAR*, 1967-68, fig. 8, 9, p. 48.
2. Narain, A.K., and Roy, T.N., *The Excavations at Prahladpur*, Varanasi, (1968), fig. 8, 18a, p. 29.

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of their small number, it may be held that it was not a favoured type of the period, and was used probably on special occasions only.

The second type comprises bowls mostly coming under the earlier mentioned group B (fig. 25, 2, 5). The following three main types in them have been recognised.

(i) The specimens which have everted rim or round rim-edge, and uniformly thickened sides (fig. 25, 2, 5).

(ii) The specimens with short neck and globular body (fig. 25, 17). They are comparatively very small in number, thus, indicating their limited popularity.

(iii) Those bowls which have closing featureless rim or vertical featureless rim with straight sides (the specimens of this group are noticed from Sarai-mohana[1] only).

The third important vessel, which might have been used for the drinking purpose, is a *loṭā* of varying sizes and forms (fig. 25, 28, 29, 30). Among the various sub-types, the specimen with cut flat base needs special mention (fig. 25, 29).

Serving Vessels

No specific example can be positively identified as a serving vessel. However, the following varieties of bowls and dishes can probably be included under this category :

(i) Wide mouthed shallow bowls,

(ii) Small sized dishes and

(iii) The bowls which have the appearance of a modern '*doṅgā*'-like vessel.

The first two are represented in all the wares, while the last is noticed exclusively in the black-and-red ware.

Cooking Vessels

It is surprising to note that no specific vessel of the period can be positively associated with the cooking purpose. It is likely that some of the forms among the prevalent types might have been used for this purpose, *e.g.*, the dishes with sagger base, and the small to medium sized pots in the ordinary red ware. The above suggestion, however, is not supported by any positive evidence, as none of the vessels, found in any of the wares, showed any trace of soot.

1. *IAR*, 1967-68, Fig. 8, 1, 9, p. 48.

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Storage Vessels

Two types of vessels appeared to have been produced for the storing purpose, one for the ordinary food-stuff, and another for storing fatty liquids or commodities of rare use. The former group of vessels was produced mostly in the red ware, whereas, the vessels belonging to the latter purposes were produced in the black slipped and other slipped wares.

(*a*) *Storing-jars*

They are of various sizes and are divisible into three main groups, *viz.*, (i) the large sized jars, (ii) the medium sized jars and (iii) the small jars. The height in majority of the cases could not be determined, as only their rim portions were available. Hence, their sizes are tentatively determined on the study of the diameters of their rims and their thickness. The vessels of the group (i) were most probably used for storing grains, *etc.* This can be postulated on the basis of their forms, for most of these have carinated neck, and, their body in all the cases are rounded (fig. 25, 26, 27). As the jars are quite big, it is likely that a portion of their base (about which we do not have any idea) might have been embedded in the floor of the house.

The Group (ii) comprises only medium sized vessels, resembling the *ghaṛā* or *maṭakā* of the present day. Their purpose appears to have been the same as that the *ghaṛās* of the modern age. Apart from their use as water storage vessels, these might have been used also for storing dry kitchen goods and other house hold objects of daily use. It is suggested on the grounds of their rough texture and the untreated inner surface.

The vessels of the group (iii) are, to some extent, akin to the modern *loṭā*-shaped vessels of smaller capacity. They are of different shapes and sizes, with a high concave neck, short concave neck, flanged neck, *etc.*, having generally round body with probably round or cut flat base (fig. 25, 28-30). Besides storage, these vessels might have been used also for drinking and cooking purposes, and may be regarded thus as 'multi-purpose vessels' of the period.

Period II (Early Phase)

This period is essentially a continuation of the earliest Period I, which is confirmed by the continuity of many pottery types of the preceding layers. During this period, copper and stone were also used for making utensils. The period yielded only four copper bowls of various sizes almost (see fig. 26) identical with the modern *kaṭorī* or *kaṭorā*. Incidently, this is the highest number of copper vessels so far recovered from any period at this place. As for the stone utensil, there is a solitary specimen in the form of a bowl of soapstone. Since the number

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of vessels recovered in the above two materials is very small, a detailed study is hardly possible.

All the earthen wares of the preceding period continued even in this period, along with the introduction of the NBP ware, which also served as a cultural label for it. Among the wares, continuing from the preceding period, a decrease in the black slipped and the black-and-red wares is clearly discernible. The white-painted specimens in both these wares are conspicuous by their absence.

All the varieties of the red ware continued as usual, except the coarse red ware, which diminished considerably in number as well as types. The slipped red ware, with both sides bearing a thick slip and a smooth shining surface, and with a compact core, occupies a predominanting position.

Among other associated pottery types, special mention may be made of the grey ware vessels. The production of this ware, which was almost nominal in the preceding period, received more attention during the early phase of the Period II. The vessels in this ware are made of a thin fabric, reminiscent of the well known PGW. It is light in weight and non-absorbant.

In the red ware, too, the pots were often decorated. The applique mode of decoration of the preceding phase, which was very poor in execution, greatly improved during this phase. In addition to this incised decoration was also introduced. These decorations on the vessels have been noticed at three places, *viz.*, at the edge of the rim, on the external part of the body, and occasionally on the neck portion particularly in the case of miniature pots. There are hardly any examples, in which the decoration is noticed below the mid-portion of a pot.

The famous Northern Black Polished ware had a fairly long duration at this place lasting for about four centuries. But, the largest concentration of this pottery was noticed in the early phase. The ware made its first appearance at this place around 5th-6th Cent. B.C., and lived as a fully mature industry for about two centuries. Thereafter, a significant change was noticed in the late phase, when not only the quantity decreased, but the painted variety nearly ceased to exist. The quality of the ware was noticeably inferior in the late phase. By about 2nd century B.C., the NBP ware had completely disappeared. The records of the excavations show that its disappearance was preceded by a gradual decline in its quality as well as quantity.

The ware seems to have two broad divisions,[1] *viz.*, the monochrome and the bichrome of which the former represents the three grades. The gradation of the

1. Narain and Roy, *op. cit.*, (1977), pp. 25-26.

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ware into three fabrics, mainly on the basis of the thickness of the sherds, has been done earlier at Nasik, Jorwe,[1] Maheshwar and Navdatoli.[2]

The NBP utensils of the grade I am made of fine fabric, with thin sections, varying between 2.5 *mm.* and 4 *mm.*, and having glossy mirror like surface. Those of the grade II are comparatively less hard, glossy and smooth, with thick sections, ranging between 3 *mm.* and 5 *mm.* The Grade III is a coarser variety of the ware, the specimens of which are soft and thicker in fabric, ranging usually between 5.2 and 7 *mm.* In majority of the cases, the specimens, belonging to the last group, lack mirror like lustre of the typical NBP ware. It may be mentioned here that a variation in the lustre is noticed in all the groups. The study revealed a uniformity in the nature of the clay of all the three grades. The different remains, however, in the thickness of the core, the levigation of the clay and the surface treatment. The study of the specimens of the early phase, particularly from the two important cuttings XI and XII A, revealed that the frequency of those of the Grade I was almost neglegible, in the earlier layers of this phase and their position improved only slightly in the succeeding layers, whereas, the other two grades of the ware dominated almost the entire phase. This is an indication of the fact that the NBP specimens of grade II and III were in more demand throughout the phase in comparison to those of the Grade I.

Among the pots of the three qualities (Grades I, II and III), the top graded variety (Grade I) must have been obviously more difficult to produce than the other two varieties. It is likely that the Grade I variety served the needs of the upper strata of the society only, as a possible substitute for metal vessels. This might have been manufactured also with a view to export such NBP vessels to remote places where this variety of the ware was not produced. The vessels of the other two varieties (Grades II and III) were used mostly by the local population, as suggested by their abundant occurrance.

The ware ranged in different colours like black, steel blue, pinkish, silvery, golden *etc.*, of which the black with its various shades, was most favoured.[3] In certain cases, where the shining black film is peeling off, a mat red surface is noticed.[4] Evidence of reddish patches externally on the body is also seen. The core, normally grey in majority of the cases, at time has variation.

1. Sankalia and Deo, *Report on the Excavations at Nasik and Jorwe*, Poona, (1955), p. 47.
2. Sankalia, H.D., Subbarao, B, and Deo, S.B., *The Excavations at Maheshwar and Navdatoli: 1952-53*, Poona, (1958), p. 133.
3. Narain and Roy, *op. cit.*, (1977), pp. 25-26.
   The NBP with Similar shades are reported from Kauśāmbī, Prahladpur, Hastinapura, Ahichchhatra, Vaiśālī, Sonpur, Oriup and many other sites in Bihar, and from Maheshwar, Navdatoli, *etc.*
4. Similar evidence are also reported from Hastinapura, Maheshwar Navdatoli. Lal, B.B., The Excavation at Hastinapura and Other Explorations in the Upper Ganga and Sutlaj Basins, *AI*, Nos. 10 and 11, p. 51 also Sankalia et al., *op. cit.*, (1958), p. 133.

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The NBP vessels, having two contrasting colours,[1] are limited in numbers and exhibit linear designs over them as a rule. This class of pottery is reported also from Kauśāmbī and prahladpur, in the reports of which, different views[2] have been put forth for this colour effect. Their small number suggests that they were used only on special occasions.

The occurrence of the NBP vessels in three qualities is a clear indication that the NBP ware was a local industry. This suggestion is further strengthened by its proliferous nature, representation of the diverse shapes (mainly in the bowls and dishes), and different colours on it.

Its importance and demand in the society was mainly due to the reason that its surface was highly imprevious to liquids. Besides, the ware was durable and had the capacity to maintain the temperature of the liquids comparatively for some more time, as compared to the other vessels of the age. It, perhaps occupied the same position in the society, as the stainless steel utensils do in the present age. It is likely that the absence of metal vessels was partly made up by the use of the NBP ware vessels.

The value attached to this ware can be judged by the repaired specimens reported from other sites.[3] It is interesting to note that these repaired vessels are found not only from those places where they might have been imports, but also from such centres where the ware was locally produced, such as Sonpur and Khairadih. From the above discussion it is possible to infer that it was a prized commodity of the period, and beyond the reach of the common people of the society.

Small to medium sized vessels seem to dominate the NBP ware at this place. The vases are also comparatively smaller in size than the usual. The NBP vessels, it appears had a restricted use, either for eating or, in some cases, for storing only liquids or any precious material.

The shapes noticed at this place do not show any marked change from the ones, occurring at other comparable sites. Bowls and dishes predominate and reveal close affinity with those recovered from Prahladpur,[4] Kauśāmbī,[5] Vaiśāli,[6]

1. Narain & Roy, *op, cit.*, (1977), pp. 37-39.
2. G.R. Sharma is of the view that "these variations are principally due to the amount of oxygen and carbon monoxide present in the kiln atmosphere during firing" Sharma, G.R., *op. cit.*, (1969), p. 129. However, the excavators of Prahladpur are of the view that it was "the result of some trick firing or some other technique." Narain and Roy, *op. cit.*, (1968), p. 21.
3. Sahay, Sachchidanand, 'Origin and Spread of the Northern Black Polished Ware,' in ed. Sinha, B.P., *Potteries in Ancient India*, p. 146. The repaired vessels of NBP have been found from the excavations at Rupar, Bairat, Ujjain, Sonpur, Kumrahar, Khairadih *etc.*
4. Narain, A.K., Roy, T.N., *The Excavations at Prahaladpur*, Varanasi, (1968), fig. 9.
5. Sharma, G.R., *op. cit.*, (1969), fig. 12.
6. Sinha, B.P., and Roy, Sita Ram, *Vaiśāli Excavations*: 1958-62, Patna, (1969), figs. 22, 23 and 24.

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Śrāvastī,[1] and other sites. The range of shapes in the NBP at this place is limited to the above mentioned forms in addition to a few vases. Other types like plain and lipped basins, tumblers and carinated *Hāṇḍi* in the same ware have been reported from Sonpur and Kauśāmbī, but are absent at Rajghat.

Eating Vessel

Dish

The functional classification and details of different wares including NBP and Grey wares of period II are detailed below. No marked change in the representation of the forms of the eating vessels has been noted during this phase, as compared to the preceding Period I.

Like the preceding period, there are three main divisions in the dishes of this period also. The dishes of the small variety range in diameter from 20.4 to 26.2 *mm.*, with their main concentration being between 20.4 and 25.5 *mm.* The specimens belonging to the second and the third groups measure in diameter from 26.3 to 38.4 *mm.*, with their main concentration being between 30.3 and 37.6 *mm.* All these were represented in all the prevalent wares of the age, but the red and the NBP wares contained the maximum number of dishes. These were mostly with rounded, straight, convex and straight tapering sides, and usually flat or flattish basis. A interesting feature particularly of the red ware dishes is the presence of the traces of soot.

Bowl

The following types in bowls were recognised in the NBP and other wares :

(a) flanged bowl (fig. 25, 44)
(b) flanged corrugated bowl (fig. 25, 45)
(c) flanged corrugated bowl with carination near the base
(d) Corrugated bowl (fig. 25, 46)
(e) Bowl with convex or rounded sides having sharpened or featureless thickened rim. (fig. 25, 43).

The specimens belonging to the type (a) are represented either with straight or convex sides. It is a popular type of the red and the black-and-red ware. The study shows a great variation in the representation of the flange. Provision of the flange was meant to receive the lid. It is possible to infer that such vessels served as closed containers for short time storage.

Type (b) is the dominating variety, noticed with straight convex or rounded

1. Sinha, K.K., *op. cit.*, (1967), fig. 5.

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sides. It is the characteristic type of the NBP ware, though, in a few cases, it is found in the black slipped and grey wares as well. A very small percentage of the specimens in the NBP shows painted designs.

The specimens belonging to the type (c) are in very limited quantity, and contain mostly straight or convex sides. The study shows variation in the representation of the rim, flange, corrugation and carination point. Since they are limited in number, no meaningful results can be derived from their measurement study. The type (d) shows variation in the corrugation marks.

The specimens belonging to the type (e) were noticed in all the wares of the period, suggesting thereby its wide popularity. Apart from these, some additional features were also noticed in the red ware specimens. All the other types in bowls, represented in various prevalent industries of the period, range in diameter from 6.8 *mm.* to 19.2 *mm.* and in height from 3.1 *mm.* to 7.8 *mm.*, or more. Their main concentration, however, is noticed between 10.9 and 13.7 *mm.* and between 4 *mm.* and 5.5 *mm.* in diameter and height respectively.

Drinking and Serving Vessels

In this category no new type was introduced during the period under review and the people continued to use similar vessels, as were found in the preceding period. It is quite possible that some small sized basins, dishes and big bowls might have been used for the purpose of serving meals as well, besides their other multiple functions.

Storage vessels

The most common shape met with in the red ware are the storage jars of varying sizes. All the three groups, (i), (ii), and (iii) of the earlier period were recognised among the jars during this phase as well with little or no change. Their purpose seemingly also remained the same, as in the preceding phase. The specimens belonging to the groups (i) and (iii) were now in greater demand, possibly due to their multipurpose nature.

The other type which found place in the daily life of the people, was formed by a good number of basins of varying sizes. They have generally a thickened and collared rim, with usually uniformly thickened convex sides. Similar vessels are still current in this region, and are known locally as *Kohā* and *nāda*, the latter being a comparatively smaller vessel. They are used for various purposes, like storing water, washing and serving food to the cattle.

Industrial vessels

Crucible : Two pottery crucibles were found (see pl. IV, A.) from the strata of the early phase of the Period II. One of them is a smaller and an almost

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intact specimen. The other one seems to have been of a longer size. The capacity of the former is measured as 46 *cc*. Both the specimens show a vitrified and enamelled outer surface, as a result of high temperature of heat. Both have rounded base and convex sides. They were used for melting purposes, which is evidenced by the presence of green rusted bits of metal sticking on the inner walls of the specimens. Similar crucibles have been reported from many Indian sites, *viz*., Maheshwar and Navadatoli,[1] Nevasa,[2] Nasik,[3] Kauśāmbi,[4] *etc*.

Late Phase

The materials used in the pot-making remained the same, as noticed in the preceding phase. The pottery was characterized by a general decrease, and the emergence of some completely new types. The Northern Black Polished Ware, which was regarded as the second abundant industry of the previous phase, showed a marked decline both in frequency as well as quality. Although the finer variety of the preceding period continued in a limited way, it is noteworthy that the coarser variety now outnumbered the finer variety. The common shapes, like the bowls of the preceding phase, however, continued during this phase also. Another significant change was the near disappearance of the black slipped ware.

The emergence of the coarse and thick grey ware, mostly represented in dishes, vases and basins, is a significant development. The characteristic feature of this class of pottery was that it bore no surface treatment. The clay used was also of a poor quality, containing coarse to medium grained sand. This, coupled with indifferent firing, had left the core highly porous, gritty and dull, In majority of the cases, the core of these vessels was grey, but tended to be blackish in a few cases. Apart from the occurrance of the usual forms like dishes and bowls, the ware showed some new forms, like vases with short narrow necks, and carinated *hāṇḍī* with featureless rim. The fine grey ware of the early phase was almost absent. It is likely that a small number of sherds, occurring during the phase, might not have been found in their original context. In keeping with these developments, the black-and red ware industry was also negligible.

The red ware industry, too, showed a marked decline in quality. The finer variety of dishes in the red ware, noticed in the preceding period, was absent in this period. A marked decadence in the fabric and surface treatment, as compared to that of the preceding phase of this culture, has also been noticed. A major typological difference was represented by the noticeable decreases in the number

1. Sankalia, H.D., *et al, op. cit.*, (1958), p. 200.
2. Sankalia, H.D., Deo, S.B., Ansari, Z.D., and Ehrhardt, *From History to Pre-History at Nevasa* : (*1954-56*), Poona, (1960), p. 383.
3. Sankalia, H.D., *et al., op. cit.*, (1955), pp. 104-105.
4. Sharma, G.R., *op. cit.*, (1969), p. 97.

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of dishes and bowls, and a corresponding increase in the number of other shapes like vases and basins.

As at Rajghat, this phenomenon of change occurred at other sites as well. It is tempting to suggest that this change in the use of common vessels was brought about in the wake of a change in food habits, which would also involve a different manner of consuming food. The food, that could once be consumed in dishes and bowls, would now require a basin like vessel. Alternatively, the devices in perishable material were gradually replacing the earthen vessels. The possible change in food habits is also attested to by the introduction of certain new types of cooking vessels.

We may conclude the above discussion on the pottery of this phase by saying that the sophistication, particularly in the surface treatment of vessels, was far less pronounced than in the preceding phase. There was also a marked shift towards utilitarian forms involving, a change in the mode of living, which is also indicated by the appearance of new forms. This change is even more marked in the succeeding period.

The vessels used for the different purposes are discussed here under :

Eating Vessel

Dish: As compared to the early phase, the dish seemed to have been less popular with the people of this phase. The three size groups (i), (ii), (iii), mentioned earlier, were noticed during this phase as well. Some of the earlier shapes remained unchanged. The small sized dish ranged in diameter from 15 *mm.* to 20.6 *mm.* and from 3.5 to 8 *mm.* in height. The medium and big sized specimens measured in diameter from 25.5 *mm.* to 31.2 *mm.* and from 3.4 *mm.* to 5.5 *mm.* in height. All these had mostly incurved, straight, or convex sides with flat or flattish base. As compared to the early phase, the dishes with sagger base were now more in number, and appeared mostly in medium to coarse fabric of the red and the grey wares. It is significant to note here that some of them are found soot-stained, indicating thereby that the type was also used occasionally for cooking purposes. A comparative study of the diameters of dishes shows that, on the whole, dishes of both the Period I and the late phase of the Period II of Rajghat appeared to be smaller than the average diameter of the dishes in the early phase of the Period II. This phenomenon is in keeping with the observation made elsewhere that the early phase of the Period II saw the optimum development of this art of pottery making, while the succeeding phase of the Period II showed a gradual decline in it. Production of large sized dishes as in the early phase of the Period II, particularly the thinner examples would obviously require greater skill and technique. That the potters of the early phase of the Period II were capable enough to achieve this proficiency is also attested to by the sophistication in the surface treatment, which

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has been commented upon earlier in detail. An important point to note in this regard is that some of them were decorated with raised concentric bands, with centrally placed pointed knob on the inner side of the base.

Bowl: The other vessels used along with the dish were the bowls of different varieties, which were most probably meant for eating or serving different items of food. It is interesting to point out here that the specimens of bowls belonging to the group 'D' were found in majority. The absence of the groups A and B is also noteworthy. It seems that the two were replaced by new shapes, like vases with short constricted neck, having globular body (fig. 25, 61,62), and beaker-like pots, respectively, similarly, the specimens belonging to the Group E, which were represented only in the black-and-red ware, were also absent, since the ware itself discontinued. However, these shapes were not represented in the other wares of the phase also. The flat-based bowls in the coarse NBP and the red and the grey wares (fig. 25, 54-58, and 63-67) formed a new variety. They are specimens of varying sizes, and are comparable with the present day *Kaṭorī*. The specimens ranged from 5.1 *mm.* to 16.5 *mm.* in diameter, and from 2.6 *mm.* to 6.5 *mm.* in height. These included the miniature specimens as well. As is the case with the dishes of the period, the inner bases of the bowls were also decorated with the concentric bands, raised knob, or stamped designs. This new variety was marked by a lack of elaboration in its shape, and had a distinctive flat base. Features like flange, corrugation, incurving of sides, which were present in the bowls of the preceding phase, did not occur in the bowls of this new variety. One notices a general trend towards simplification of forms in this period, and this new variety of bowl is a convincing illustration of this trend.

Drinking Vessels

The pedestalled bowl and the bowls with straight sides of the earlier times were dropped during this phase. Among the vessels used for drinking purpose, a new type, with a shape similar to the present day beaker (fig. 26, 10) emerged.[1] The other form, which might have been used for the purpose, was a *loṭā* like vessel (fig. 25, 60, 71). A new shape in the *loṭā* was also noticed, which had a flat base and a concave constricted neck with an outcurved rim, affording an easy grip. Patañjali[2] uses the term '*ghaṭī*' and '*karka*' for this type of vessel. The term '*ghaṭī*' may correspond with the smaller sized vessels.

Serving vessels

We shall now mention about those vessels which might have been used for serving the food. It is likely that some of these might have been used additionally

1. It is not mentioned and illustrated in the report (Narain and Roy, *op. cit.*, 1977). Further, it may be stated that the similar type is reported also from Rupar in the corresponding level. *A. I* no. 9, fig. 5, 8.
2. Agnihotri, P.D., *Patañjali Kālīna Bhārata*, p. 192.

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for other purposes as well. It is supposed that various types of basins, ranging from small to medium size, may generally come under this category. The supposed specimens are of three varieties, *viz.*, lipped basins, plain basins and handled basins. In view of the limited number of specimens, it is not possible to determine the comparative frequency of each variety.

At Rajghat, as also at several sites, the basins both of lipped (see fig. 26, 16) and handled variety were introduced for the first time. This is a very significant development since it offers an opportunity to examine the factors behind these innovations. The size of the vessel, together with the facility for serving the liquid, may indicate that the community meals were being served and that the community kitchens were in operation.

Storage Vessels

Apart from the three earlier groups of vessels, which continued from the early phase of the Period II and the Period I, some new types in them were also introduced with variations. The use of the rest of the vessels might have been the same, as suggested earlier in this chapter.

The new variety included the widely distributed pear shaped vases with several variants (fig. 25, 68, 69), like a complete pot with short horizontal splayed out rim (fig. 25, 70), affording an easy grip, and pots with constricted neck having globular body and a flattish base (fig. 25, 61, 62). Of these, the first seems to have been an 'all purpose vessel.' The rounded base suggests that supports were provided to them. They could be used for cooking, taking water from the river or well, serving water for drinking purpose, and as storage pots.

The vessels of the other type would have been more convenient for storing liquids rather than any dry material, and could be easily covered. This inference is borne out on account of their short constricted neck and small mouth, as similar specimens are mostly used even today for storing liquids like *ghee* and oil.

Cooking vessels

The vessels specifically made for cooking purposes appeared at this place for the first time during this phase, around 400 B.C. Mention in this regard may be made of the carinated cooking *hāṇḍīs*, which were of varying sizes and shapes. They are divisible on the basis of their shapes into two groups, *viz.*, those affording an easy grip and those without the facility of a grip. The specimens belonging to the latter group were prominently carinated at the meeting point of the base, which was sagger and had closing featureless rim (fig. 25, 59, 72). The wide distribution of the type is also confirmed by the occurrence of identical specimens from various other sites. The specimens belonging to the former group were comparatively less carinated and had a constricted neck (fig. 25, 73), for affording an easy grip. These

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were medium to large sized vessels and were represented only in the red ware. Considering their size, it may be presumed that they were meant for cooking food for a fairly large number of persons.

It is interesting to note that both Pāṇini[1] and Patañjali[2] refer to '*sthālī*' as a cooking vessel, which can probably be identified with this '*hāṇḍī*' Although there can be some difference of opinion regarding the correct use of this pot, referred to in the literature,[3] there can be no doubt that, during the time of Pāṇini and Patañjali, the vessel *sthālī* was used as a cooking pot.

The second important vessels which was most probably used for cooking, was a large sized *kaṛāhī*, with sturdy loop handles on either sides (fig. 25, 79). These handles must have been found convenient for lifting the heavy weight of the vessels together with the cooked content. The shape resembles the modern *kaṛāhī*, widely used today in the house holds. This vessel might have been introduced with a view to using it for some specific type of cooking. Its flat base and shallow depth would indicate that it was used for frying or frying-cum boiling edibles. Both Pāṇini[4] and Patañjali[5] refer to it as *Ukhā*. The former also refers to its different sizes.

Beside these innovations, some of the dishes with sagger base in the coarse grey ware, also perhaps used for cooking purpose, as indicated by their burnt exterior bases. It seems that the newly introduced *kaṛāhī* could not completely replace the old cooking pots, and thus, the practice of using the dishes as frying pans did persist, but with a considerably reduced frequency. Apart from the above mentioned types, the vases, ranging in size from small to medium, were also probably used for cooking, as some of them bear traces of soot.

Period III (Early Phase)

The same materials in the pot making were used even during this phase, as were seen in the preceding NBP ware period. The clay vessels were now definitely rough, and represented comparatively a more degenerated ware industry than the late phase of the NBP ware culture. There was a marked decline in the fabric as well as the surface treatment of the pottery of the two centuries covered by the early phase of the Period III. The bulk belonged to the red ware which had by now become the pottery of the masses. The black slipped, the fine NBP ware, and the grey ware of the preceding period now completely disappeared. The occurrence of a few vessels of the coarse NBP and the coarse grey ware of the

1. Agrawala, *Pāṇini Kālīna Bhārata varṣa*, p. 147.
2. Agnihotri, P.D., *op. cit.*, p. 192. The vessel was used for the preparation of rice and soup.
3. Singh, M.M., 'Dish-on-stand,' ed., Sinha, B.P., *Potteries in Ancient India*, (1969), comments, p. 144.
4. Agrawala, V.S., *Pāṇini Kālīna Bhārata varṣa*, pp. 126, 147.
5. Agnihotri, P.D., *op. cit.*, p. 193.

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late phase of the NBP ware culture, however, was confined only to the early levels of this phase, suggesting the survival of the potting traditions of the NBP ware culture in a very limited manner, for a little more time.

It appears that the demand for this type of vessel had considerably shrunk and perhaps, before the beginning of the 1st century B.C., the NBP vessels were on their way out. Was its high cost of manufacture or the skill required to manufacture acting as a deterrent ? Alternatively, could it be that the specialist potters engaged in their manufacture were not available. Could we also not infer that it was a special purpose ware, used in a socio-religious context and that, when the purpose and the incentive had been no longer there, the need for manufacturing such vessels had also gone. One of these or a combination of them could be a possible explanation for the disappearance of the NBP, not only at Rajghat, but at several others, since there is a near uniformity in the date of its disappearance at most of the sites.

In comparison to the preceding period the pottery of this period showed considerably less refinement in manufacture, and surface treatment. The latter is almost non-existent. The painting tradition, although not very pronounced even in the preceding period, had completely disappeared. Instead, the decoration on the vessels now consisted of designs in applique, stamped and incised varieties. The vessels exhibited religious, natural, geometrical or a combination of two or all the three motifs. Dishes and bowls became less popular. The spouted pots appeared for the first time. It may be recalled that lipped basins were reported from the preceding period, and the appearance of spouted vessels during this period may be seen as a further elaboration of the same tradition. Spouted vessels were of a type, which could be conveniently handled by using one hand, while in the case of the lipped basins, which continued to occur during this period as well, the use of both hands was obligatory. The vessels used for the different purposes are discussed hereunder.

Eating Vessel

Due to their low frequency, the diameter-height study of the vessels was not possible in this case. However, the three different sizes, classified earlier, are discernible even among them. Their low occurrence further suggests that the dish type was rapidly loosing its popularity during this period. In fact, it may be stated that none of the different varieties, current in the preceding period, were continued and what we get in turn during this period are the vessels which resembled those of the earlier variety only superficially. The new ones were much shallower and had, as a rule, thick sides and flat base.

As in the case of dishes, the bowls, too, were of an entirely new variety, except for a limited number of specimens which might represent a survival from

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the preceding NBP ware period. They are divisible into two groups, *viz.*,

(i) Bowls with vertical sharpened rims, having invariably flat base with several variants (fig. 27, 1-3).

(ii) Bowls with uniformly thickened or incurved sides with flattish base (fig. 27, 5, 5a).

Of these, the former variety is a very common type during this phase. They are of varying sizes, *viz.*, small, medium and big. The last one could also have served the purpose of a lid for big storage pots, as the same is used even today. They are known in the region as *'kasorā,'* and used both for eating as well as covers for the *kuṇḍās* (large storage pots). The specimens belonging to the latter group appeared to have been used exclusively for eating purposes.

Drinking Vessel

No specific vessel for drinking purpose is known to us during this phase. The earlier types, too did not continue. However, the smaller pots, identified as *loṭā* might have served the purpose of a drinking vessel. They were found in the following four different varieties.

(i) Those with globular body and having depressed base (fig. 27, 21).

(ii) Those with vertical neck and carinated shoulder (fig. 27, 13).

(iii) Those with constructed neck and corrugated convex sides (fig. 27, 20a).

(iv) Those with sagger base (fig. 27, 20).

Besides these *loṭās*, another vessel may also be mentioned in this connection, which was furnished with a *s makara-mukha* spout, and decorated with a natural design and a row of religious symbols, like *triratna*. It was treated with a thick red slip. The only secular use, which can be surmised for this kind of vessel, was for serving water or any other liquid. The rarity and special treatment given to this pot is suggestive of its use on special occasions. Alternatively, these pots might have been used for some ritualistic purposes as well, as indicated by the presence of the *makaramukha* spout, religious symbols and the special treatment given to the pot. The vessel could have been used in the course of worshipping the deity or offering water to him. This inference is made on the basis of the present day analogy, as well as the evidence provided by the sculptural art. It is interesting to note that the spouted vessels have been dipicted in plenty in the sculptures of Sanchi,[1] Bharhut,[2] Amaravati,[3] Mathura,[4] *etc.* In an instance at

1. Joshi, N.P., *Life in Ancient Uttarāpatha*, figs. 342-344.
2. Barua, Benimadhab, *Bharhut Aspects of Life and Art*, Calcutta, (1934-37), Book III, pls. XXVI-35, XLV-45.
3. Sivaramamurti, C., *Amaravati Sculptures in the Madras Government Museum*, Madras, (1956) figs. 18, 19, 22.
4. Joshi, N.P., *op. cit.*, fig. 347.

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Sanchi,[1] an elephant is shown worshipping a *stūpa*, by carrying a spouted vessel in his trunk.

Serving Vessel

The serving vessels noticed earlier in the late phase of the NBP ware culture, were found to be current, with certain variations in their sizes and forms, during this phase also.

Cooking Vessel

Among the cooking vessels the preceding types like *hāṇḍī* (fig. 27, 7), and *kaṛāhī* like vessels with loop handles (fig. 27, 6) continued with some changes in their forms. The former showed soot marks on them. Besides these, a few small to medium sized vases were also probably used for cooking, as clearly suggested by their burnt exterior bases. The use of dishes as frying pans, a common practice of the preceding period, went completely out of use.

Storage Vessel

All the three groups of vessels, as suggested earlier for storage purposes, were found during this phase as well. The shapes, however, were modified substantially. The major modification was in the average capacity of these vessels, which got reduced. It would also appear that the narrowing of vessels implied the storage of liquid material. Out of the three groups, the majority belonged to the group (ii), *i.e.*, the medium sized vessels, next in the order of frequency were the small storage vessels. The number of large sized storage pots was very limited. The medium sized vessels are divisible into three main groups on the presumed functional basis.

1. The wide mouthed vessels with constricted neck, or high concave neck or short concave neck (fig. 27, 9, 10, 11, 12, 13) might have been used for storing various house hold or kitchen commodities, cereals of water. Their occasional use for cooking is also attested to. The occurrence of lids with prominently flanged waist, having deep centrally placed bowl (fig. 27, 4) suggests that the vessels of this group were also covered.

2. The vessels possessing long narrow neck (fig. 27, 17-19), appeared to have been used exclusively for storing liquids like oil and *ghee*. This inference is borne out mainly due to their narrow neck, which would be hardly convenient for storing dry material. The vessels, recovered at this place, are of two types :

(i) Those with ovaloid body and flat base.
(iii) Those with globular body and a sagger base.

1. Joshi, N.P., *op. cit.*, fig. 345.

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It is interesting to note that Patañjali[1] also refers to the vessels, which were exclusively meant for storing *ghee* and oil. They were distinguishable from other pots. Jain literature[2] also mentions separate earthen vessels in which oil was kept. They were termed as *Tellapalla* (*tailapalya*) and *kuviya* (*kupikā*).

In case of the pots, having globular body and sagger base, some kind of pot-rest or stand might have also been used to provide them necessary support. The existence of stands (fig. 27, 26) seems to corroborate this presumption. Earthen pots are still considered ideal for storing oil, *ghee*, *etc.*, in the villages of Varanasi district and the nearby region.

3. This group comprises those vessels which could have been used for storing both liquids as well as dry material. Some of the forms (fig. 27, 12, 14) in this group may be compared with the modern '*surāhī*,' used exclusively for storing water. One of the examples, with expanding mouth and concave neck having a thick flat base (fig. 27, 15) could have a somewhat similar use, as the present day flower pots. In Jain literature,[3] such pots are denoted by the terms *Pindalaga* and *Pupphacchajjiya puspachadika*. The vessels under this group appeared to have been covered by a type of lid, which was provided with a knobbed terminal for the purpose of an easy lifting (fig. 27, 99).

It is significant to note here that the vessels of the last two groups could not have been used, in any case, for cooking, whereas, the specimens belonging to the first group were evidently used for such a purpose also.

Besides these vessels, quite a good number of miniature pots was also found. It is difficult to ascertain their exact function, though a few possibilities with regard to their use may be tentatively suggested. They could have been manufactured either (i) for children as toy utensils, (ii) for storing kitchen goods in small quantity like spices, (iii) as measuring pots, or (iv) for ritualistic purposes. Incidently, their use in rituals can be seen even today in a local religious function of Varanasi, known as "*Lolārakachhaṭha*."

Late Phase

Among the materials used in pot-making, the stone was reprensented by four bowls and two lids (see pl. XXVII, A). Two stone bowls had an outer ledge below the rim to receive the lid, while the remaining specimens were simple shallow bowls. It is, thus, clear that out of the four specimens those which had a ledge below the rim were used for keeping precious materials, and the rest for eating or other purposes. Both the lids were provided with button-knobs at the top, and are

1. Agnihotri, P.D., *op. cit.*, p. 195.
2. Deo, S.B., 'Pots and Utensils from Jain Literature,' *op. cit.*, p. 40.
3. Deo, S.B., 'Pots and Utensils from Jain Literature,' *op. cit.*, p. 41.

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usually known as 'casket lids' or 'toilet casket lids.' They are characteristic finds of the early historical sites of this region, and were supposed to have been used for those bowls which had a ledge below the rim.

The other material which was employed for vessels was copper. Only two copper bowls, including a miniature example, were found at our site (fig. 26, 1-8). Both had flattish base, with featureless rim, and reveal remarkable similarity with the present day specimens.

All the earthen vessels, represented during this phase, are in the red ware, suggesting thereby the complete adoption of the open kiln method of firing. The recovery of a solitary piece of the Rouletted were is an exception to the above observation, which seems to have been brought from somewhere else. The exact source is difficult to point out. The red slipped ware, which was sparingly used in the preceding early phase of this period, was represented during this phase in a reasonable amount.

The shapes, represented in this refined red slipped ware, were not many and showed only two types bowls including the miniature pedestalled one, and the spouted vessels. Of these, the latter continued from the early phase, with some variations. At times, some of these were elaborately decorated, while the former, in no instance, bore any kind of design. Thus, it can be presumed that the earlier group was meant only for special use.

The period witnessed the emergence of new wares, like the Red Polished and the Rouletted ware, which were so far unknown at this Place. They, thus, provided material evidence for the demarcation between the early and the late phase of this period. The Red Polished Ware was introduced here in the form of sprinklers. The varied shapes, represented in this ware, can be seen also at Amreli and some other places, specially in the Saurashtra and Gujarat, where its main concentration has been noticed. The ware was made of well levigated clay, and characterised by slipped and high polished surface. Some of these specimens, which were perhaps the quality production of the ware, approximated to the lustre and the fabric of the NBP ware at this place. It is needless to discuss here other details as the same has already been dealt with variously by Sankalia,[1] Subba Rao[2] and S. R. Rao.[3] However, among the different views with regard to its origin, putforth by various authorities,[4] Rao pleads for the indigenous theory of the ware.

1. Sankalia, et al., *op. cit.*, (1958), pp. 159-161.
2. Subba Rao, B., *Baroda Through the Ages*, Baroda, (1953), pp. 53-64.
3. Rao, S.R., *Excavations at Amreli*, Bulletin Vol. XVIII (1966), pp. 51-59.
4. According to Deshpande, the ware was "produced under Roman influence." He says that, "this influence was exercised by the Romans who were settled down at coastal and inland emporia and who wanted for their use the types of wares they were accustomed to use in their country. Local inhabitants probably also evinced interest in these new ceramics and the

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The most distinctive features of the Red Polished Ware are, firstly, its shining, smooth surface and, secondly, the impervious nature of the exterior surface. Because of these features, its occurrence at several Indian sites, particularly those of western India, during the early centuries of the Christian era has led scholars to assume that the Red Polished Ware has emerged from the Roman Samian Ware. Its occurrence has, therefore, been attributed to Roman contacts. At Rajghat, the occurrence of the Red Polished Ware along with the red slipped ware makes us inclined to re examine the question, whether the former could be regarded as a natural refinement of the indigenous tradition, or whether the technique of manufacturing Red polished Ware was developed as a result of the Roman contacts. We have attempted, in brief, in the following lines to delineate the comparable and the contrasting features of the red slipped and the Red Polished Ware. The red slipped ware, occurring in this period, showed an improvement, particularly in the surface treatment, Over the examples of the preceding period. It may, therefore, be assumed that there was a deliberate attempt to refine the red slipped ware during this period. As a natural corollary to this, the optimum point in this process of refinement could be said to have been reached in the production of what is now known as the Red Polished Ware. However, the points of differences between the two are quite substantial.

(i) In the surface treatment itself, the Red Polished Ware specimens showed a far higher degree of finish than those of the red slipped ware. The two striking features of the Red Polished Ware, namely, the lustrous nature of the surface and its impervious nature, made it stand apart from the red slipped ware, which lacked the above two features.

village potter produced such imitation wares for the consumption of the sophisticated class." (Deshpande, M.N., in ed. Sinha, B.P., *Potteries in Ancient India*, p. 278). Sankalia also subscribes to a similar view and says that "as a result of the extensive commercial contact with the Mediterranean region, the technique of Roman Samian ware was successfully copied in northern India-Saurastra in particular—where we get the largest number of sites as well as forms." (Sankalia, *et al.*, *op. cit.*, (1958), p. 161). On the otherhand, Rao in support of his indigenous theory, states that "out of 63 types found at Amreli—the largest number of shapes ever noted in the Red Polished Ware 40 are jars, 9 bowls and the rest are either sprinklers or miniature bowls, but no jar or sprinklers of the type found in India is known in the Samian ware in the Roman Empire. As regards the bowls, only two types vaguely resemble the squattish bowls with or without external decoration in the Samian ware. Thus. almost all the types including the most distinctive sprinkler should be considered as indigenous and, therefore, neither imported nor copied from the Samian ware." (Rao, S.R., *op. cit.*, p. 56). So far as the question of similarity in the technique of manufacture is concerned, he quotes, the note of the archaeological chemist who also does not support the imitation theory of the Samian ware. Thus, from the above quoted views, it is clear that there is a difference between the two wares in the technique of manufacture and forms. No typical shape of the Samian ware is represented in the Red Polished Ware.

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(ii) The shapes in the two wares showed different traditions. While the Red Polished Ware was restricted to the well known sprinklers type, which was usually a spouted vessel, the red slipped ware was represented in shapes like spouted vessels, and, to a lesser degree, in other shapes like bowls and vases.

(iii) The vessels in the Red Polished Ware had, as a rule, thin walls. Further, great care and skill was noticed both in the purity of the clay and the firing. In all these respects, the red slipped ware was left far behind.

(iv) While several decorative motifs occurred in the red slipped ware, the Red Polished Ware, as a rule, was plain.

(v) The Red Polished Ware appeared suddenly on the scene and did not have an antecedent history. In this respect Rajghat evidence is at par with the evidence from most of the sites in India, where Red Polished Ware has been noticed in a stratigraphic sequence.

To sum up, the evidence appears to be in favour of a non-Indian origin of the Red Polished Ware. In such a case, the technique learnt by way of commercial contact with the Roman world was put to good use by local potters for manufacturing vessels seemingly used for ritualistic purpose.[1] It is, thus, possible to assume that first experiments of manufacturing the Red Polished Ware locally were made in western India, where from it might have travelled northwards to the Gangetic valley.

Along with the Red Polished Ware, there existed another class of pottery at this place, known as Rouletted ware.[2] The core in this case was grey, and the surface, slipped in black, bore traces of rouletting. The form of the vessel could not be determined, as only a fragment of the base was found. Its presence at Rajghat is significant, as it indicates links between Varanasi and other Indian sites yielding this ware. In Uttar Pradesh, Rajghat is the only site which has yielded this ware. It this connection some sites of eastern India, like Sisupalgarh, Tamluk and Chandraketugarh may also be mentioned, where the evidence for the Rouletted Ware has been noticed.[3] So far the Rouletted ware has not been reported from any

1. At Bhitari, the sprinklers were found in clusters in the main temple. *IAR*, 1963-64, p. 59, pl. XLA. The ware is represented by a single sherd. It is not referred to in the report (Narain and Roy, *op. cit.*, 1977) but it was discussed in the seminar on pottery organised by the University of Patna (ed., Sinha, B.P., *Potteries in Ancient India*, (1969), p. 284). During the course of study the author also took notice of this find and discussed it with the second author of the report. According to him, since there was a difficulty in dating the specimen, as it was found from an unstratified deposit, the same was not mentioned in the report. But it seems probable that it reached here quite late sometime between 1st and 3rd cent. A.D. The extensive means of communication and facilities of trade and commerce during the period might have been responsible for its introduction at this place.
3. A exhaustive list yielding this pottery has been supplied by Deshpande, M.N., in 'Roman Pottery in India', Ed., Sinha, B.P., *Potteries in Ancient India*, p. 282.

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comparable sites in central and western India (north of Maharashtra) and is also similarly absent in U.P. sites, lying west of Varanasi. Kauśāmbī, too, has not reported this ware. It is, therefore, reasonable to assume that the Rouletted Ware was brought in Varanasi Via eastern India. In the preceding pages, possible links between western Indian sites and Varanasi (Rajghat) have been suggested on the basis of the occurrence of the Red Polished Ware. The occurence of both the Red Polished ware and the Rouletted ware at Rajghat would probably indicate that ancient Varanasi in the early centuries of the Christian are was a prized market for finished ceramic goods, brought from elsewhere, as indicated by the extremely scarce occurrence of the Rouletted Ware. Ancient Varanasi during the period also drew within its fold itinerant potters who might have produced locally the Red Polished Ware.

Among all the wares, the bowl, lid, baking pan, handled vase, stand and sprinkler turned out to be the distinctive types of the period. The spouted pots achieved comparatively more popularity and the spouts were frequently represented in various animal forms, like *makara-mukha*, hump shaped, duck faced, dog faced and *Kīrti-mukha*. The frequency of the decorated vessels also increased during this period. Among the new modes of decoration the embossed technique needs special mention. The designs, executed on these vessels, were mostly naturalistic, geometric or of religious significance. Of these, the first named included an additional motif, like tree or plant.[1]

A discussion of various vessels, used for different purposes, is given below :

Eating Vessel

Dish

The *thālīs* (dishes) used by the people during this phase were different from those, recovered in the preceding periods. All the specimens (fig. 27, 63, 64), usually had flat or flattish base, with a few exceptions of rounded base (fig. 27, 64). In majority of the cases the rims were splayed out, thus, affording firm grip for lifting the vessel. The preceding *thālīs*, noticed in the NBP ware culture, with convex straight or incurved sides, were replaced by comparatively small sized and shallow specimens. This change in size suggests that they were meant exclusively for eating purpose.

Bowl

The period is characterised by the occurrence of a fairly good number of bowls. All these varied in diameter and depth, suggesting that these were used

1. This particular design has not been illustrated. It is difficult to judge whether this particular motif was a representation of the Buddhist tree, which would make the design also as one having religious significance.

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for various purposes, like those of the preceding NBP and the earliest periods. An interesting feature was that a majority of them was provided with flat bases. They are divided into the following two groups.

(1) The specimens of this group had tapering sides, which progressively thickened towards the flat base, with several variants (fig. 27, 35, 28, 29). The diameter and height of these ranged respectively from 9.9 *cm.* to 18.3 *cm.* and 3.5 *cm.* to 5.9 *cm.* Somewhat similar types were also noticed in the preceding early phase of this period.

(2) The specimens belonging to the other variety were shallow in depth and possessed flat bases, as a rule (fig. 27, 32). In comparison to the former type they were less popular.

Drinking Vessel

Mention may be made in this connection of two bowl types, which could have served the purpose of drinking. They are as follows:—

(i) The bowl of this type had a featureless sharpened rim, tapering sides, and a flat base (fig. 27, 101). The type appears to have emerged from some of the shapes, noted in the preceding early phase of this period (fig. 27, 1,2,3,4,5 & 5a, 6, 7,8,99). Among all the bowls of this period, it was most abundant. It seems to have close affinity with the similar bowls, found at sites like Prakash,[1] Hastinapura,[2] Kauśāmbī,[3] *etc.*

The featureless rim and the capacity of the pot suggest that it was used for drinking water or some other liquids. It may also be noted that somewhat similar bowls with some modification are in use even today for drinking purpose in this region, and they are known as *Kulhaṛa.*

(ii) The other type was comparatively less popular, and had straight sides with an everted rim and a wide groove below, for affording an easy grip. The bowl would have been more convenient for drinking than any other purpose. The saggering base of the specimen further suggests that it could have been used also as a lid of some storage vessels. Similar type is reported from Kauśāmbī[4] also.

Besides these two shapes, other drinking vessels were also similar to those found in the early phase of this period. However, the specimens of this phase showed some occasional minor changes in their form.

1. Thapar, B.K., *op. cit.*, fig. 27, 3, p. 85.
2. Lal, B.B., *op. cit.*, (1954-55), fig. 20, p. 64.
3. Sharma, G.R., *op. cit.*, (1969), fig. 24, 1, 4-6.
4. Sharma, G.R., *op cit.*, (1969), fig. 34, 176, 180. The specimen is identified by the excavator as vase.

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Serving Vessel

Some basins the period (fig. 27, 48, 49) might have been used for serving dry items of food. Apart from the preceding ones, some new varieties in them were also seen. The rims of these were either splayed out or externally collared with several variants, to facilitate hold. They are of both small and medium sizes.

Similarly, lipped basins of varying sizes, with some variations in the representation of lips, were also noticed. Evidently, they were also the serving vessels.

Cooking Vessel

This phase of ancient Varanasi was particularly rich for having a fairly good number and variety of cooking vessels. The following three main types in them have been noted :

(1) Carinated cooking *hāṇḍī*,
(2) *Kaṛāhī* like vessel, and
(3) Baking pan (*tāvā*).

The first two were known at this place also from the late phase of the Period II, while the last one was introduced here for the first time in the late phase of this period. Of these, the first was a more popular cooking vessel. They were of varying sizes and capacity, and differed in shape from those represented in the preceding period at this place. They are somewhat akin to the present day metal specimens known in this region as '*batloī*', a vessel which is used mostly for cooking rice and pulses.

The second important type consisted of frying pans (*kaṛāhī*) which were found in good numbers, showing remarkable affinity with the modern examples. They were of two types, *viz.*, (a) Those having convex base and (b) those having flat base. The capacity of the former was comparatively more than the latter. The convex base and the larger capacity of the vessels under (a) may indicate that these were used for both frying and boiling. The flat based pans, on the contrary, were shallow, and would have been used primarily for frying only. All these were invariably provided with handles on either side, to facilitate the hold.

The third important type was the baking pan (fig. 27, 50). Its identification as a baking pan is based on the ground that it is usually very shallow in depth. Like the frying pan, these were also provided with handles. A somewhat similar type, made of metal is used even today for baking *Chapātīs*. Like the present day practice, the baking pans would have been used occasionally for frying purposes also, though they were primarily meant for the baking or toasting purpose. Such vessels have been denoted by such terms as *Taviā* (*tāpikā*, *Tavagā*, and *Tavanī* in the

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Jain[1] literature. The local term used for this kind of vessel is *tāvā*. The above varieties of cooking vessels, recovered during the phase, thus, denote that all the modes of cooking, *viz.*, boiling, frying, baking or toasting were prevalent among the people of this age.

Storage Vessel

Among the pots used for the storage purpose, the number of large sized vessels was considerably less, while the remaining two groups of vessels, *viz.*, the medium and the small sized, continued with little or no change. Two large sized vessels were found *in situ*, near a drain, their rounded bottoms being sunk underneath the floor. The manner of their placement goes to suggest that such vessels were used even for storing water, besides being used for storing commodities like grains, *etc.*

A fairly good number of medium sized vessels were also provided with handles on either side. These might have been ideal utensils for the storage purpose, as they were handy and had facility for lifting. Considering their rough appearance, it may be suggested that they were meant for storing commodities of everyday use. These were either convex or rounded, and had handles on either side, as a rule. These weree lug handles, represented in the form of horns large semi-circles (fig. 27, 55) or the same was centrally holed (fig. 27, 56). Of these, the occurrence of the first variety was commonly noticed during this phase.

In this group, some utensils were also made for storing liquids. Example in this connection may be given of those pots, which possessed narrow neck. Most important among them were with long concave neck, a rounded body, and convex corrugated sides, having flat base (fig. 27, 63). The small sized pots were represented in a fairly good number. In this group also, two types of pots were found. One for storing dry materials in small quantity, and the other for storing liquids only. The former had a open mouth with short concave neck, and rounded body, while the latter contained a narrow long neck.

In this context mention may also be made of a good number of lids of varying sizes and varieties, which were supposedly used as covers of different storage pots. It is interesting to note that lids are also mentioned in the Jain literature as *Padipillana* (*pratiprerana*), *Pindhāna* (*pidhāna*) *Pihanā*, *Pihaniā* and *Dhankani*.[2] The following groups among lids may be suggested on the basis of their probable use :

1. Lids, with a flange waist, (fig. 27, 40, 41) were introduced at this place around 200 B.C., and continued with their variants upto 6th-7th century A.D. The flange in the lid was meant for covering the rims of the vessels. The type with its

1. Deo, S.B., 'Pots and Utensils from Jain Literature,' *op. cit.*, p. 38.
2. Deo, S.B., 'Pots and Utensils from Jain Literature,' *op. cit.*, p. 39.

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variants was widely distributed, and has been reported from various sites like Kumrahar[1] Vaiśālī,[2] and Kauśāmbī.[3]

2. The lids, having vase shaped central depression (fig. 27, 33-35), and the lids with inner central cup (fig. 27, 41-47), with their veriants come under the second group. Although their number is not very large, the occurrence of these lids may be purposeful and significant. It may be presumed that a small amount of dry material, stored inside large pots, was kept in the lids as samples by the shop-keepers, with a view to displaying the articles for sale. It is indeed worth noting that many of the shop-keepers in this region still use similar lids for the aforesaid purpose.

The third variety includes the knobbed lids of various sizes with several variants (fig. 27, 36-39). These possibly did not serve the similar purpose, as the specimens belonging to the first two groups. The specimens of this variety might have been used to cover the storage vessels, containing both dry and liquid material. One is tempted to infer from the use of knobbed lids that there was a recurring need to uncover the vessels at frequent intervals. The knobbed lid would facilitate such a process.

Utensils of Indeterminate Use

(1) *Sprinklers*

The remarkable feature of the sprinklers at this place is the wide range of variety (fig. 27, 66-77). Probably no where else in this region, such a differentiation is reported, as at Rajghat. There is no unanimity of opinion regarding the use of these sprinklers, but at the same time it was no doubt a special purpose vessel. The term given to this vessel does not appear to be appropriate. Its use as such is also very much doubted. Perhaps the peculiarity of the nozzle attracted the notice and the name 'sprinkler' was given. It does not appear likely that the vessel was used for sprinkling liquid. Not a single complete specimen of this type was found from this place, yet an idea of the same can be had from similar representations on sites like Kumrahar, Kauśāmbī and Amreli. Even in their complete forms, it is not possible to ascertain very definitely, as to how these might have been used. A suggestion was made that the type was popular on Buddhist sites, because of sculptural representation of a similar vessel.[4] If the type had any religious significance, it was not confined to Buddhist sites alone. As will be evident from the excavations at Bhitari, the sprinklers were much in demand on Hindu temple sites as well. The widespread use of the 'sprinklers' in the residential area not

1. Altekar, A.S., & Misra, Vijayakanta, *op. cit.*, (1959), fig. 29.
2. Sinha, B.P., & Roy, Sita Ram, *op. cit.*, (1969), fig. 42, 20, 21.
3. Sharma, G.R., *op. cit.*, (1969). fig. 33, 132, 132a, 132b.
4. Deshpande, M.N., 'Roman Pottery in India,' ed., Sinha, B.P., *Potteries in Ancient India*, pp. 278-279.

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only at Rajghat but in other sites as well would show that the vessel was of significance in every day life. We, therefore, feel that the type was as much popular in secular buildings as in religious. All the same, it cannot be denied that the vessel was of a very special kind, as can be guessed from its bright and smooth surface and the provision for spout, nozzle and bottle-like neck. Considering the Possible use in secular context, one has to take note of the fact that the nozzle is invariably in the form of an inverted triangle, with the opening at the top. This device seems to be provided for affording the steam to collect and come out of the vessel at one point. The bottle like neck would further facilitate this process. The spout in this vessel is not of the kind which is usually meant for pouring liquid out of the vessel. The opening of the spout is often much wide, which would suggest that the purpose of these so-called spouts was to pour the liquid, perhaps preheated in the pots through them. The resultant steam was thus made to come out of the nozzle. The base of the spout contained several small perforations, so that the liquid that was poured inside the vessel, was strained of its unwanted solid contents. If the vessel was used in distillation, the constant heating and contact with fire would leave its tell- tale marks as soot on the exterior of the base. So far we do not have much information about the bases of these vessels, but it would be interesting to watch the evidence in this regard.

Period IV

Among the materials used in pot-making, copper was used for the first time for making a miniature vase (fig. 26, 8). Several heavily corroded tiny fragments were also found at the site, but no idea about other forms can be had from them.

The other material like soapstone was used only for making bowls, which included the miniature ones as well. All these had flange below the rim to receive a lid, suggesting thereby that they were used exclusively for storing precious materials, and not for eating purpose. The complete miniature specimen with a knobbed lid (see pl. XXVII) might have been used for keeping jewels, toilet objects or any paste.

When we come to the earthen vessels we notice that this period yielded comparatively less amount of pottery than the preceding periods. This was due to the limited area undertaken for the excavation. The occurrence of a small number of specimens which are blackish grey in appearance has also been noted. It may be recalled that the use of a closed or partially closed kiln had been discontinued after Period II. It is difficult to assess the significance of this revival in view of the paucity of evidence from Rajghat and other contemporary sites. Not many changes were introduced during the period, requiring a detailed study. In the Red Polished ware, however, certain new forms were introduced, while in the preceding periods only sprinklers were being made in this ware. The Rouletted Ware of the preceding period is absent.

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Among the spouts of the period, the frequency of the *makara-mukha* was recorded almost in the same ratio as was noted in the preceding period. The representation of the animal had now become more conventionalized. The hump shaped spouts, which belonged to the second dominant type of the preceding period, showed a marked decrease in the quantity as well as quality. Some important types of the preceding period like duck faced, dog faced and *kīrti-mukha*, discontinued. These were replaced by tubular spouts, which were decorated, for the first time, by human or animal representation, with applique bands. The number of decorated vessels was less in comparison to the preceding age. The tradition of painting the pots was resumed after a lapse of several centuries.

We shall now discuss the different utensils which were used on different occasions and purposes.

Eating Vessel

Of the vessels meant for the eating purpose, the dish was gradually becoming shallower and, thus, it was taking the form of a modern plate (fig. 27, 97). Although this feature had started in the preceding period, it took its final shape perhaps in this period only, when it became a popular form.

The other type (fig. 27, 98), mentioned as dish, was more likely to have been used as a lid, as the presence of bold ribbing internally near the rim might perhaps cause inconvenience in taking food in it.

Among bowls, which might have been used along with these plates for eating purpose, only four types need mention here. They are—(i) those with externally corrugated flanged rim (fig. 27, 81), (ii) those with featureless thickened flanged rim (fig. 27, 82), (iii) those having vertical featureless rim with groove at the top (fig. 27, 83), and (iv) those with thickened featureless externally grooved rim (fig. 27, 84). They measure in an average 11.6, 11.5, 14.8, 10.5 *cm.* respectively in diameter, and 8.3, 5.5, 8.4, and 4.3 *cm.* in height. The other types (fig. 27, 79, 80, 85) were sufficiently large and might have served as containers in the kitchen.

Drinking Vessel

The drinking vessels of the preceding age were absent in this period, and they were replaced by entirely new ones, *e.g.*, a tumbler shaped vessel having a pedestalled base (fig. 27, 86). Similarly, small pots used for the drinking purpose in the earlier period now occurred in modified forms (fig. 27, 91, 92). Mention in this regard may also be made of the spouted vessels, which might have been used for serving the drinking water.

Serving Vessel

In the basin there are three main types, which can be referred to as serving

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vessels. As has been suggested earlier, the lipped variety of varying sizes and diameters may be mentioned as vessels for serving liquids, while for dry materials, two new shapes-one with centrally holed loop handle and the other with featureless rim having vertical sides and flat base, were perhaps in use. The last type was provided with big handles, placed on either sides of the vessels.

Cooking Vessel

Among the cooking vessels, the carinated *hāṇḍī* showed much variation in its representation, which can be seen in the widening of its mouth, height and carination of the vessel. The four complete published specimens (fig. 27, 93-96), measure 17 *cm.*, 13 *cm.*, 20 *cm.*, 18.3 *cm.* in diameter respectively and 12 *cm.*, 7 *cm.* or more, 9 *cm.* and 6 *cm.* in height. Out of these, the last two (fig. 27, 95, 96), which had splayed out and flared featureless rim, showed some change and were somewhat limited in occurrence. These were invariably provided with the facility for lifting the vessel, after cooking. Among other shapes, the vessels for frying and baking purposes persisted with no noticeable change. A noteworthy feature in this connection was the scarce use of the medium and the small sized pots for cooking.

Storage Vessel

Among the vessels meant for the storage purposes, all the three earlier difined groups were found. Most important of them were the large vessels with globular body, having rounded or conical base. The height and diameter at the mouth in one case is 77 *cms.* and 16 *cms.* respectively. The use of such large sized vessels, in all probability, might have been for storing grains. The bases of these were partially burried underneath the floor.

The medium sized vessels were noticed with much variation. They are divisible into two groups, as in the preceding period, *i.e.*, those meant for storing dry commodities of every day use, and also probably water, and the others for storing liquids) like *ghee* or oil. Here it may be mentioned that a number of types in the group continued from the preceding period. Most important among them were the handled vases. The vessels meant for the former use had open mouth and provided with holding facility, in majority of the cases, while the pots for the latter had narrow neck of varying sizes, and, at times, exhibited expanding mouth. All these were covered with the similar types of lids, as discussed earlier in connection with the vessels of the preceding period. They were noticed during this period with little change. Apart from these, some new types in them were also seen.

Utensil of Indeterminate Use

Two types of vessel come under this class. Of these, one is a vase-like pot, with narrow neck (fig. 26 ,17) and another is a strainer (?) (fig. 26, 15), comparable

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with the present day *Chhannī*. The distinguishing feature of the former is that there is a hole adjacent to the channel. Such pots are called *dharma-Karaka* in the Buddhist literature, and were used by the monks.[1] They are reported from Kumrahar also.[2]

Resume

In conclusion we may point out that there are no cultural breaks in the history of ceramics within the period from Circa 800 B.C. to C. 7th century A.D. This is, however, not to deny the fact that certain major changes were introduced at certain stages, which we propose to discuss in brief in the following lines.

In the earliest period (C. 800 B.C. to C. 600 B.C), the ceramic traditions at Rajghat appear to be the same, as may be noticed at several other sites of this part of the country. The absence of the PG ware and the presence of the black slipped ware would bring Rajghat nearer to the sites like Chirand and khairadih Bowls and dishes in the black slipped ware are predominant forms. Along with the black slipped ware there also occurred the red slipped ware, the black-and-red ware and the fine grey ware. The above seem to be forming a homogeneous group, representing some sort of a table ware, as distinct from the other group, consisting of roughly made storage vessels and basins. No cooking vessels as such ware identified but some of the dishes with sagger base could have been utilized for the purpose. The remaining vessels like bowls and dishes were probably being used variously for drinking, serving, storing and consuming the cooked food.

A major change appears to have been introduced between Circa 6th. century B.C. and 4th centrury B.C., with regard to the surface treatment, with the introduction of the NBP ware, well known for its highly lustrous surface. There was, however, no significant change in the typology of the vessels, while all the preceding wares also continued. There was a comparative decrease in the black slipped ware. This is not surprising, as it was this particular ware which was being gradually replaced by the NBP ware, having a far superior finish than the other one.

Among the other changes, the absence of the white painted black slipped ware is noteworthy. However, greater attention appears to have been paid towards making the vessels more serviceable and convenient in handling. This is attained through the features like flange and carniation. The production of the NBP at Rajghat and on several other sites in eastern" U.P. and Bihar suggests that there were particular groups of potters who familiarized themselves well with the technique, and were simultaneously active at some major centres.

1. *Chullavagga*, V, 13, 1, and VI, 21, 3.
2. Altekar, A.S., and Mishra, Vijaya Kanta, *op. cit.*, (1959), fig. 33, 3, 7, 15.

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In the late phase (C.400 to 200 B.C.) of this period some noticeable changes take place with regard to the surface treatment, as also in the typology of the vessels. The refinement noticed in general in the preceding phase seems missing and in its place we get what is termed as the coarse NBP. In other wares also more emphasis is laid on the sturdiness rather than the sophistication. There is, thus, a marked decrease in the bulk production of dishes and bowls, which, as we had earlier suggested, belonged to a group of table ware. All this probably indicates a mark shift in the food habits, as there appears to be visible change in the manner of consuming foods and drinks. This is also testified by the appearance of lipped basins. We have now no dearth of evidence of cooking vessels, which include the carinated *hāṇḍī* and *karāhī* like vessels with strap handles.

This process of change observed in the late phase of the Period II continues with greater vigour in the early phase of the Period III, thus by about Ist cent B.C. or little thereafter, the pottery traditions which were very popular between C.600 and 400 B.C. were completely replaced. The dishes we got in the Period III, show a rather faint survival of the refinement, variations and finish, so characteristic of the early phase of the Period II. Similar was the case with the drinking vessels as well. From this period also comes the first evidence of a spout. We have earlier suggested that the spouted vessels served rather more effectively the purpose which was being served earlier by lipped basins. During this period also, noticeable change was a comparative reduction of average capacity of the cooking and storage vessels. The narrowing of the neck and the mouth has led us to suggest that there was now a greater need for containing and storing liquid material.

Sometime between the beginning of the 1st A.D. and 3rd cent. A.D. corresponding with the late phase of the Period III, some very distinctive and new varieties were introduced, these included the well known Red Polished Ware and the Roulet ted Ware. Mention may also be made in this connection of the emergence of sprinkler type vessel. We have examined in detail the possible relationship between the red slipped and the Red Polished Ware. We find that in many respects the Red Polished Ware is quite different from the red slipped ward and, thus, there is a distinct possibility that the Red Polished Ware at Rajghat was introduced from elsewhere, more likely from the western Indian sites where it occurs in far greater number and variety Similar is the case of the rare occurrence of the Rouletted Ware which too was introduced as a result of contact with east Indian sites. In connection with the sprinkler type, we have examined in detail a certain special feature of its form, particularly the spout and the nozzle like opening at the top. Apart from its use as a type meant for ritualistic purpose, we have suggested an alternative use of the vessel that it may have been used for distilling liquid. In this connection we have also made a special note of depiction of this vessel in the Ajanta cave, where it has been shown as placed on a tripod. However, to confirm this interpretation it would be necessary to examine in greater details the bases of these vessels both inside and

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outside, inside for any remanents or ingredients and outside for marks of burning. Except for the above innovations there were a few changes in general typology of the vessels. In regard to both serving and cooking vessels attempts seems to have been made to make them more convenient for handling. Cooking vessels were being made of various sizes and capacity and it was now possible to cook or to boil more conveniently ingredients like rice and pulse in a vessel which had a rounded base to afford even distribution of heat at the time of cooking. Short sided dishes akin to a baking pan were introduced, and it is possible to guess that apart from boiling and frying, baking too appears to have been introduced.

In regard to storage vessels we have an interesting evidence from the study of the lids, which occur in fairly large number and atleast three different types on the functional basis were identified. Some of these lids show a cup like depression which would have served as containers for small quantity of the material as sample. All this tends to suggest that people needed to store all kinds of dry and liquid materials. During this period, *i.e.*, the late phase of the Period III, there was an elaboration of the spouts, the openings of which were being decorated with animal and occasionally with human figures.

In the Period IV coinciding with the Gupta Period the area under excavation was much less than the preceding period. Accordingly, the yield of the earthen vessels was much less. Mention may be made of two noteworthy treatments : the limited introduction of sophisticated tumbler like vessel with a pedestal base. Apart from the above type which served the utilitarian needs we come across certain vessels in fairly good number and which do not appear to have been used for any common utilitarian purpose. Under this category have been included a good number of miniature vessels which were mostly smaller prototypes of larger varieties. These could have been used as toy vessels for children or alternatively they were used in rituals, *etc.*

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4

Dress

Kāśī cloth was famous for its good quality in the remote past. Buddhist literature abounds in references to the cloth of Varanasi or Kāśī. The words *Kāśī-Kuttama,*[1] *Kāsiyāni,*[2] *Kāsikavastra,*[3] *Kāśī,*[4] *Kāśīkaṅśu,*[5] *etc.*, undoubtedly refer to the fabric produced in Kāśī. *Majjhima Nikāya*[6] mentions the delicacy and fineness of the Varanasi cloth, which was known as *Vārāṇaseyyaka.* It is said in the *Saṁyukta Nikāya*[7] that Kāśī cloth was the best among all. It seems reasonable to infer from the various literary references that the cloth manufactured in the city was termed as '*Vārāṇaseyyaka,*' while the other made outside the city in different other parts of the Kāśī *Janapada* was known by such terms as *Kāsiyāni, Kāsī Kuttama, Kāsikaṅśu, etc.* The distinction between the two was also probably well understood by the various users. The inference, if accepted, presupposes the existence of fairly well established textile industry in ancient Varanasi. This supposition is further strengthened by the testimony of *Tuṇḍila Jātaka,*[8] according to which, there were rich cotton fields in the neighbourhood of Varanasi. It is also said that the cotton produced around Varanasi was very fine, and this might be the reason for the superior quality of cloth manufactured here. Such fields were watched by the ladies, as indicated by the word '*Kappāsakkhettarakkhikā*' mentioned in the Mahājanaka Jātaka.[9]

The Varanasi cloth was so fine that its both sides appeared soft, smooth

1. Fausböll, Vol. VI, p. 47.
2. *Ibid.*, p. 500.
3. Motichandra, *Prāchīna Bhāratīya Veśa Bhūṣā,* (Saṁ. 2007), p. 97.
4. *Ibid.*, p. 97.
5. *Ibid.*, p. 97.
6. Motichandra, *Costumes, Textiles, Cosmetics and Coiffure in Ancient and Medieval India,* ed. Gupta, S.P., New Delhi, (1973), p. 11.
7. Upadhyaya, Bharat Singh, *op. cit.*, p. 367.
8. Fausböll, Vol. III, p. 286 *Kappāsakhetta*).
9. Fausböll, Vol. VI, p. 336.

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and polished,[1] and it was sold in such distant markets as that of *Sāgal*[2] modern sialkot in Pakistan. Varanasi was also manufacturing silk, *Kṣauma* (linen) and perhaps also woolen cloth.[3] The blankets mixed with *Kṣauma* were also made here.[4] Embroidered cloth was another special product of this city, as indicated by the word '*Kāśika suchivatthadhara.*'[5] Regarding the material used for manufacturing cloths, the Buddhist literature informs that they were variously made from hemp (*saṇa*), *Bhaga*, *Kuśa-grass*, bark, (*valkala*), wood (*phalaka*), human hair, tree fibre, *etc.*[6]

The above literary references clearly suggest that Varanasi was famous at least in the Buddhist period for manufacturing various types of quality cloths. However, the evidence unearthed from Rajghat is hardly sufficient either to confirm or reject the picture, presented by the Buddhist literature. The present chapter is not intended to discuss the textile industry of ancient Varanasi, but it aims to describe the dresses worn by the people in different periods. As stated in the Chapter I, in the absence of any direct evidence regarding the dresses of the people of ancient Varanasi, an attempt has been made in the following pages to gather information in this regard solely from terracotta figurines discovered from the different levels in the excavations of Rajghat and the collection from the same site housed in the Bharat Kala Bhavan, Banaras Hindu University. However, keeping in view the limitations of the terracotta figurines as source of such informations :—their small size, the stylized treatment of drapery prevalent during various periods, and their generally fragile nature, *etc.*, the conclusions drawn entirely on their basis have to remain tentative and need not be pushed too far. In comparison to the paintings of Ajanta, *etc.*, and the sculptural panels of Sanchi, Bharhut and Amaravati, which often depict the scenes representing people from different sections of the society

1. Motichandra, *op. cit.*, (Saṁ. 2007), p. 30; also Upadhyaya, Bharat Singh, *op. cit.*, pp. 367-368.
2. Ray, J.C., 'Textile Industry in Ancient India,' *JBORS* Vol. III, Pt. II, Appendix, (1917), p. 237.
   The author of *Milindapañho* writes that "shops were there for the sale of Benaras Muslin, of Koṭumbara stuffs, and of other cloths of various kinds." The original Pali however, reads" various cloths produced in Benares Koṭumbara, *etc.*" There is difference of opinion regarding *Koṭumbara* cloth, and it appears from the above statement that it was perhaps also manufactured in Varanasi. But, according to Motichandra, "it might have been some woolen or barken or cotton stuff manufactured in the country of Audumbaras." He strengthenes his suggestion by pointing out that the words *odumbara* and *Koṭumbara* were probably synonymous. (Motichandra, *op. cit.*, (1973), p. 11).
3. Motichandra, *op. cit.*, (Saṁ. 2007), p. 30.
4. *Ibid.*, p. 30, It is stated that five hundred blankets of this material were presented by the king of Kāśī to Jīvaka Kumāra-bhṛitya, who in turn presented them to the Buddha. *Mahāvagga*, VIII, 2.
5. Fausböll, Vol. VI, p. 144.
6. Motichandra, *op. cit.*, (1973), pp. 11-13.

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with their dresses, the terracotta figurines tend to present rather an incomplete picture. Due to these reasons, it was not possible to suggest in majority of the cases any particular dress for any specific class of people, as has been done by Motichandra and others. Moreover, in most of the cases it is also difficult to find any difference between the articles of dresses of the rich and the common people. However, on the basis of our study of Rajghat terracotta figurines, some broad divisions of dresses can be suggested, particularly with reference to those of the Period IV, *viz.*, costumes of religious figurines, those of common people, palace attendants, service class ladies, soldiers, musicians, hunters, children, *etc.* This needs to be emphasised here that the dresses of all the above categories do not find representation among the terracotta figurines of all the periods at Rajghat, and, even in the Period IV, the number of specimens under each category is indeed very limited. The dress of the first was costly and of fine texture, while it was plain and simple for the second. The dress represented on the deities may probably be considered as that of the people of higher stratum. The dresses of the remaining categories are attested to only by the specimens of the Gupta age. The palace attendants and service class ladies are shown mostly in costumes foreign in origin, while the soldiers, musicians and others wear Indian dresses.

As compared to the male figurines, the female representations fare better in every period and, therefore, we have naturally more information regarding female garments. A majority of the specimens is shown naked without any kind of dress but those showing drapery reveal a variety of costumes.

We do not have any evidence to show the nature and type of the garments worn by the people in the pre-6th century B.C. period. However, the occurrence of spindle whorls coming from the earliest level at Rajghat[1] suggests that spinning was practised by the people.

The dress of the succeeding people must have been varied, as indicated by abundant literary references made in the Buddhist texts.[2] The assumption is not, however, supported by the archaeological evidence from Rajghat, as the source material at our disposal is negligible during the age. There are only a few terracotta

1. *IAR*, 1967-68, p. 49.
   Some bead like terracotta specimens, coming from the Period I, have been termed as spindle-whorls by the excavators. Similar specimens were also unearthed from several other sites of the Gangetic valley. However, the proposed identification is debatable and needs further confirmation.
2. The cloth of Varanasi enjoyed special fame during the period which is confirmed by the fact that the dead body of Buddha was covered with it and this cloth was so fine that it did not absorb oil. (*Dīgha Nikāya*, Vol. II, 3.24.103) These were of different colours like blue, yellow, red and white. The blue coloured cloths were known as *nīlavaram*. (*Dīgha Nikāya*, Vol. II, 3.13.43) Its importance is further attested by the statement of Chāpā (*Therigāthā*, Gāthā, 298, (Hindi) Bhikshu Dharma Ratna, Mahabodhi Sabha, Sarnath).

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figurines and none of them depicts any clear indication of dress. A female figure from the early phase of the Period II is shown wearing a band-like object around the waist, which may be identified as a girdle. This presupposes that some kind of lower garment was worn which was fastened around the waist with a girdle-like object. An idea about female's dress can also be had by another female representation recovered from this place.[1] The lady is shown wearing a loin cloth reaching approximately upto the knees. The upper part of her body is left bare (fig. 28, 1). In fact there is no figure found at this place, which could reveal any type of upper garment worn by the people of this age.[2] Nor there is anything to suggest about the male dresses.

Period III (Early Phase)

The Female Costume

We have regular evidence of drapery from C. 200 B.C. onwards. The ladies usually wore two piece dresses—one for the upper part and the other for the lower. The lower garment consisted of two types, *i.e.*, *sārī* and a skirt like dress, while the upper consisted of modern cape like garments and tunic. The *sārī* is the chief article of female costume, which is secured around the waist and reaches upto the ankles or near about the knees or a little below it. At times an elaborate girdle also surrounds the top portion of the *sārī* on the waist, presumably with a view to holding the latter. The skirt-like garment appears in the late phase of this period. Different modes of *sārī*-wear have been revealed by the terracotta figurines. A standing female figure of Lakṣmi (fig. 28, 2) is shown in a *sārī*, loosely wrapped round the body and tucked behind, not exhibiting any pleats either in the front or at the back. It is secured at the navel with a four stringed girdle possibly with a clasp-like ornament in the centre. The tasseled end of the girdle noticed on the left leg seems to be made of beaded strings, which hangs gracefully and adds beauty to the garment. In this case the '*sārī*' is shown a little above the ankles' length with a flowing lower end. It is interesting to note that the contours of the legs of the figure are clearly visible indicating diaphanous nature of the dress. The evidence may suggest that the region was manufacturing fine quality of cloth during

1. Singh, Ram Chandra, *Rājghāta kī mṛiṇamūrtiyān*, Lucknow, (1978), pp. 17-18, fig. 13. The author has assigned this figure to the late Mauryan age.
2. The sites of Bulandibagh, Sonpur, and Chirand in Bihar, not far removed from Varanasi, have however, yielded some female figurines with various garments like aprons, comparable with modern *sārī*, blouses and skirts. Whether or not the ladies of Varanasi also used such dresses during the period under discussion is a difficult question, which cannot be answered at present due to the paucity of evidence. Narain, L.A., 'Associated Antiquities of the NBP Ware with Special Reference to Bihar,' ed., Sinha, B.P., *Potteries in Ancient India*, (1969), p. 197 also Sinha, B.P., and Verma, B.S., *Preliminary report on Chirand excavation for the year 1969* (cyclostyled copy).

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the period under discussion. The use of fine quality of cloth is further attested to by a headless female figure from Sarnath,[1] which according to Ghurye wear a *sārī*. Contemporary literature too furnishes numerous references regarding the fine quality of cloth manufactured in Varanasi during the period under review. The Arthaśāstra of Kauṭilya also mentions that Kāśī and Puṇḍra were famous for *Kṣauma* (linen) cloth.[2]

In the second style the '*sārī*' does not extend beyond the knees (fig. 28, 3). In this mode a piece of cloth was first wound round the waist, and then the ends were collected and drawn tightly from the front between the thighs and tucked in at the back. The hind pleats are clearly shown, and the folds, produced by a tight back pull, are indeed charming. The '*sārī*' is fastened with a beaded girdle consisting of three strands. This style appears to be identical with the modern '*sakachchha*' mode of wearing *sārī*. It was common in ancient India in the region of Mathura and Sanchi, and is widely prevalent in Maharashtra even today.

The dress is convenient at the time of work, which is evident from the figure itself who is shown seated on a stool (*moḍhā*) and engaged in some kind of work. This mode of wearing *sārī* may probably be associated with the working women. Since the style is not common in the Varanasi region today, it is, therefore, surmised that it might have been adopted here in ancient times due to contact.

Another female figure (fig. 28,5) reveals an interesting style commonly depicted in the sculptures of Bharhut and Sanchi in Central India.[3] The lady is shown wearing a girdle consisting of one strand. The *paṭkā* or ornamental cloth is shown suspended with the girdle and hangs between the feet. The indication of vertical strokes over it possibly suggests that it was made of stringed beads. This feature can also be seen in the terracotta figurines of Bangarh[4] and other places. The nature of other lower garment is not clear. However, the presence of girdle is not without significance, which, it may be presumed, might have held some *sārī*-like garment of very fine cloth of diaphanous character. It is interesting to note that a thin line runs all along the border of the figurine which may probably be interpreted as a long transparent piece of cloth used for covering the whole body from head to foot. The suggestion is tentative, as the upper part of the body is broken.

Another mode of *sārī* wear can be seen in a '*dampatī*' figure of the period (fig. 28, 7). Singh[5] is of the view that the female figure has worn a '*ghāghrā* and

1. Ghurye, G.S., *Indian Costume*, Bombay, (1966), fig. 182, p. 93.
2. Motichandra, *Kāśī kā Itihāsa*, (1962), p. 61.
3. Motichandra, *op. cit.*, (Saṁ. 2007), figs. 49-53, pp. 69-72.
4. Goswami, K.G., *op. cit.*, pl. XIX (b).
5. Singh, Ram Chandra, *op. cit.*, fig. 15, p. 22.

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the male a *dhotī*. However, as per our own observation, the dresses of both the figures are similar, and there is hardly any ground for identifying different garments of the two figures, who in all probability wear '*dhotī*.' In this mode one end of the *dhotī* has been wrapped round the waist and the remaining part has been pleated and tucked in the front. It reaches approximately upto ankle's length. In another representation (fig. 28, 8) the borders of the '*sārī*' have been shown beautifully one above the other in such a way that there is no surplus cloth to be pleated. The artist modeller are indeed successful in depicting the decorated garment. It seems that the garment was shorter than the usual length of a *sārī*.

Some terracotta female figurines exhibit still another mode of wearing lower garment. In this case, a strip of cloth is wound round the waist and the free end is brought in between the divide of the buttocks and the whole wear is further secured by a girdle. It covers only the vital organs of the lady and the remaining lower and upper parts are left bare (fig. 28, 6). It has been classed under the '*Mithuna*' figure by Singh,[1] in which the other part has broken.

An extremely interesting upper garment is worn by a figure (fig. 30, 11) whose sex is difficult to identify, as the upper part is missing. The garment is simply a piece of cloth which is depicted hanging at the back and showing decending down to the knees. This probably corresponds to the modern cape. It is lavishly adorned with pearls. Similar representations can also be seen on a few terracotta figurines of the Gupta period from Ahichchhatra[2] as well as in the paintings of Ajanta.[3]

Profusely embroidered tunic or coat like garment was also worn by the women during the period but the occurrence of this dress is rare (fig. 28, 15). It has a front opening and has been buttoned at the top. It is closely fitted to the body and the nature of sleeves cannot be determined. The figure wears a peculiar kind of lower garment, which is difficult to identify.

Late Phase

In the later phase of the period lying between 1st and 3rd Centuries A.D. a definite change in the dress can be observed. This may be seen, particularly in the case of female's costumes.

A few dresses, depicted in some female terracotta figurines of Rajghat, show evidence of Kushāṇa influence. In fact, the entire costumes seem to be foreign in origin. A standing female figure (fig. 28, 12) is dressed in a full sleeved mini close-fitting tunic reaching a little below the waist and fastened by a belt. Their ends are shown to flutter over the lower garment. The vertical lines shown on the tunic

1. Singh, Ram Chandra, *op. cit.*, fig. 14, p. 20.
2. Agrawala, V.S., The Terracottas of Ahichchhatra', *AI* No. 4, (1947-1948), figs. 102, 286.
3. Dhavalikar, M.K., *Ajanta : A Cultural Study*, Poona, (1973), pp. 28-29.

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below the belt possibly suggest that it was embroidered also. This may be compared with the modern small frock-like garment which has no opening either at the front or the back. There is also a small scarf which is wrapped on the right wrist of the lady and shown hanging down. She wears a pleated skirt as the lower garment, the length of which is not uniform. It reaches upto alightly above the knee on the left leg, while on the right it is shown quite below the knee on the left leg. In another representation (fig. 28, 13) the drapery is almost similar but the tunic is not embroidered and the pleated skirt is shown on the left leg only. A further change in the above female attire is suggested by another figure (fig. 28, 14) whose upper body is left bare. The mini skirt is heavily pleated and reaches only upto the thighs. The whole depiction gives the impression, as if the lady is holding the garment by her both hands. The scarf is absent in this case. In all these cases an indeterminate object is shown on the left hand. Thus, in the period, the two types of skirts are noticed showing foreign influence. They are the mini type reaching approximately to the mid thigh and the normal skirt reaching a little below the knees. That the lower end of the skirt is not uniform in any specimen, appears to be a typical feature of the garment.

Like the preceding phase, tunic or coat like garment was also worn by the ladies. An interesting variety of tunic is evident from standing lady (fig. 29, 1) who wears a full sleeved close fitted knee length tunic with open flaps. The stiched folded border is clearly indicated. The lower ends of both the flaps are fastened with a beaded tasselled lace. We fail to find its exact parallel in the nearby region. No lower garment is noticed in this case, although separate lower garments along with the tunics have been observed elsewhere.[1]

In very seldom cases, a peculiar combination of a full sleeved blouse with a '*sārī*' as a lower garment has been depicted in a few specimens. The close fitting wear has no opening in the front and reaches upto the waist[2] (pl. XXVIII, A). Most probably these garments were not the universal wear during the period as is evident from the infrequent occurrence of their representation in terracotta figurines. They were worn perhaps only by some foreigners, or alternatively, some ultra fashionable ladies of the city were at times attracted by this new foreign attire.

The Male Costume

The costume worn by men very often consisted of only '*dhotī*' or small loin-cloth. We have very scanty information regarding male dresses, as their representations are not many. The men did not wear tunic. The body above the waist is

1. Ghurye, *op. cit.*, pl. 85 (goddess Nanaia), p. 81.
2. The specimen comes from the Bharat Kala Bhavan Collection.

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usually devoid of any clothing. The standing figure of a man wears his lower garment in such a way that it reaches only upto the knees. A small piece of cloth simply wrapped once round the waist, and it is so short that it hardly covers the thigh region. As a result a small portion of the thighs is exposed to the view at the point where the two ends of the cloth meet (fig. 29, 21). This wear very favourably compares with modern towel or '*gamachhā*' still very popular in Varanasi as a common man's dress. Another male figure wears a short *dhotī*, reaching only upto the knees. In this case, the pleated ends infront pass between the thighs and have been tucked behind (fig. 29,3). It is interesting to note that a similar garment is still commonly worn in India by peasants and other working people. Similar representations with slight differences can also be seen at Sanchi[1] and Gandhara.[2] The garment is tied by strap like *Kamarbanda* (*paṭṭikā*) in a looped knot.

From the above study of both the early and late phase, it is clear that we do not have adequate information about the female upper garments. However, during the early phase itself, in some cases, there is an evidence for *dupaṭṭā*-like garment disposed in different manners (figs. 28, 6, 30, 12). Its use in the late phase is also attested to by a few specimens. In this case it is comparatively shorter in length and shown over both the shoulders. The breasts are not covered by it (fig. 30, 13). Looking at the comparative rarity of such representations and their association in most of the cases with a large variety of ornaments and hair styles, it may be suggested that the *dupaṭṭā* was prevalent among the ladies of a few selected upper class families. Tunic as an upper garment also appeared in both the phases but this cannot be taken as universal dress adopted by the general population, as it appears to be foreign in origin. It was probably worn by a thin select section of the society.

As far as the practice of stiching the garments was concerned, it made its appearance in the earlier half of the period, but it gained popularity only during its later half.

Costumes in the Period IV

Female Costume

The women during this period exhibit an interesting variety of costumes. The lower part of the body generally appears to be covered by a small piece of cloth closely wrapped round the loins and reaching a little above the ankle's length and below the knees. The front is smooth, simple and without any pleats. Similar garments in the Ajanta paintings have been identified as '*ghāghrī*', *Ardhoruka* and

1. Dhavalikar, M.K., *Sanchi—A Cultural Study*, Poona, (1965), fig. 8.
2. Murthy, K. Krishna, *The Gandhara Sculpture—A Cultural Survey*, Delhi, (1977), fig. III, 3.

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'*luṅgī* type of wear by Motichandra,[1] Dhavalikar[2] and Ghurye[3] respectively. Its representation on the terracotta figurines is not very clear, but, on close examination of several specimens depicting almost identical drapery, it may be observed that the garment shows many points of similarity with those of Ajanta paintings. However, it needs to be stressed that the attire, as depicted in the Rajghat terracotta figurines, is too close-fitted to be identified with *ghāghrī*, *luṅgī*, *etc.* It may also be pointed out that this garment appears to be a new introduction in the dress—style, and we do not find its parallel in the preceding periods. Mostly women wear it well below the navel and partly exposing the abdominal region to view (fig. 29, 6). In one case these are delightfully executed curved slanted folds in the front, giving an impression that the garment has been pulled from the back in the middle between the thighs (fig. 29, 7).

In one of the figures (fig. 29, 8) the same garment is too short and hardly reaches the knees. In comparison to the earlier examples, it is rather loose, as is evident from its dangling portion depicted on the right side. In another specimen, the garment, worn in the same fashion, reaches upto the ankles. The most interesting part is the border shown by a horizontal line on the extreme right, while there is no evidence of any upper garment in the earlier examples, the lady in this case wears a *dupaṭṭā* also, which is shown hanging down on the right side (fig. 29, 9). The figure of an embracing couple from Bharat Kala Bhavan may also be referred to in this connection, in which only the back of the lady is in view. She appears to have put on a similar garment.[4]

Sārī is another important dress of the ladies during the period, which in fact is a continuation of the earlier tradition. A definite change in the modes of '*sārī*-wear' can be observed. It was now, also occasionally decorated with designs.[5] In one of the figures of Rajghat, the *sārī* extends upto the ankles, presenting smooth and plain front with no pleats (fig. 29,10). The lower end of the garment is decorated prominently by incised horizontal lines, suggesting a sort of border. V.S. Agrawala also refers to a specimen from Rajghat, in which the *sārī* is painted in wavy bands of red and white, suggesting thereby the existence of coloured specimens.[6] In another form of wearing *sārī*, the garment extends only a little below the kness (fig. 28, 9). It is wrapped round the navel without any gather and it appears that the ends have been drawn tightly from the front between the thighs and tucked behind. The heavy oblique folds indicated by the incised lines on the

1. Motichandra, *op. cit.*, (Sam. 2007), figs. 388, 390, 410-427.
2. Dhavalikar, *op. cit.*, (1973), fig. X, 1, p. 32.
3. Ghurye, *op. cit.*, pp. 124, 277, 278, 281.
4. Srivastava, S.K., 'Technique and Art of the Gupta Terracottas' *Chhavi* Golden Jubilee Volume, fig. 570.
5. *Ibid.*, fig. 556.
6. Agrawala, V.S., 'Art Evidences in Kālidāsa,' *JUPHS*, Vol. XXII, pts. 1-2, (1949), p. 88.

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garment are regular, neat and delightful. The lady also wears a pleated *dupaṭṭā*. In another example (fig. 28, 10) the lady wears the *sārī* in quite a different manner, in which it has been wrapped round the navel and the surplus portion has been pleated and tucked in tightly at the front. In this case the front pleats are collected and secured in position by tucking the upper ends into the wrap of the garment at the navel. The central tucking creates protuberance. The lower part of the figure is broken. In another style (fig. 28,11) one part of the *sārī* has been wound round the waist and the remaining free portion has been taken over the right shoulder in one sweep in such a manner that it covers the right breast and the elbow. The above study reveals that the *sārī* during the period, was essentially a lower garment covering the parts of the body below the waist, except, of course, the lone example in which the upper part of the body was also covered with its remaining portion. The upper parts of the body at times were covered by a long *dupaṭṭā*, which has been shown either coming from the back or from the front and resting on the shoulders.

An interesting variety of ladies lower garment resembles, roughly a modern '*ghāghrā*' or '*lahangā*.' It finds representation in some of the terracotta figurines of Rajghat, and may be compared with the *Chaṇḍātaka* of Amarakoṣha[1] While describing the dress of Mālatī, Bāṇa[2] also refers to *Chaṇḍāṭaka*. It was worn by men also, according to Bāṇa,[3] but no such archaeological evidence is available to us from the Rajghat specimens. Similar lower dress, with some minor changes is worn by Yaśodā at Deogarh.[4] It is represented at Ajanta[5] also. But, the Ajanta depiction differs from the Rajghat specimen for having a frilled border. This difference in the representations may be considered as an evidence for local variations. Although the garment is popular in Rajasthan, Saurashtra, Central India, and Mathura even today, it is out of vogue in the present Varanasi.

Two types of '*ghāghrā* or '*lahangā*' have been noticed in the Rajghat terracotta figurine of the period. The first is a short one reaching the knees or a little below which is worn by Mahiṣāsuramardinī. It is pleated in front, approximately in the centre, and perhaps secured by a cord or belt like object (fig. 29, 11). The other one is a long variety with side pleats only, extending upto well below the ankles (not illustrated). It corresponds to a great extent with the present Rajasthani '*ghāghrā*.'

Another variety of stiched lower garment resembles modern petticoat (fig. 29,

1. *Amarakoṣa*, 2.6, 118.
2. Motichandra, *op. cit.*, (Sam. 2007), p. 159.
3. Agrawala, V.S., *Harṣacharita*, pp. 61 and 161.
4. Ghurye, *op. cit.*, fig. 205.
5. Motichandra, *op. cit.*, (Sam. 2007), figs. 401-402, pp. 224-225.

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13, 14, 15, 16). It extends upto ankle's length. It is combined either with a full sleeved blouse (fig. 29,13) reaching upto the waist or a scarf hanging down on the left side (fig. 29, 14). Since this petticoat like lower garment is mostly associated with the Bhikṣuṇī figures, it may be inferred that the dress could not become popular among the common ladies. The lower garment worn by the Bhikṣuṇī was known as *Kusūlaka* in literature.[1] It is sometimes tied at the waist by a belt, while a scarf is also shown hanging on the left side in some cases (fig. 29, 16), A few figurines show the petticoat a little above the ankles (fig. 29, 15, 16). Similar figurines have also been found from Ahichchhatrā.[2]

Upper Garments

The upper garment of the females of the Gupta period consisted of blouse, tunic, frock, breast-band, scarf and *dupāṭṭā*. The blouse represented in the various terracotta figurines is mostly the full sleeved variety (fig. 29, 13, 17, 18). This close fitted garment may be favourably compared with its present day counterpart, known as *Kurtī* in the region. It has a round neck with no opening at the front (fig. 29,17). The border near the neck is also sometimes indicated. Similar variety of blouse also occurs at Ahichchhatrā.[3] Bāṇa tells us that the ladies of Sthāṇviśwara were *kañchuka*, or small *kurtī*.[4] Dhavalikar compares it with the modern pullover, and claims to have recognised many types at Ajanta,[5] including the full sleeved variety. Since the lower parts of our specimens are missing, it is not possible to suggest the nature of the lower garment associated with the full sleeved blouse. However, in one instance it is combined with a petticoat like lower garment (fig. 29,13). Sometimes a *dupaṭṭā* is also seen along with it on the left shoulder (fig. 29,18).

The other variety of the upper garment is a gown (tunic) like garment reaching upto the ankles (fig. 29,19). It has no opening in the front and a border is indicated at the lower end. Similar type is traceable at Ajanta[6] also, with the difference that our specimen is close fitted upto the waist and becomes loose below it. It roughly corresponds with the *prapadīna* of literature[7] and shows similarity

1. It is translated as "a bin-like garment for its shape was like a small bin (*Kusūla*). It was fashioned from a piece of cloth with its both ends sewn together... The skirt reached as far as the navel and came down as low as four fingers above the ankles." Motichandra, *op. cit.*, (1973), p. 63, also Agrawala, V.S., *op. cit.*, (1947-48), p. 149.
2. Agrawala, V.S., *op. cit.*, (1947-48), pl. L.II, 197-201, pp. 150-51. Similar female figurines from Ahichchhatrā have been identified as Bhikṣuṇīs by Agrawala, but they differ from our specimens in the mode of wearing *dupaṭṭā*.
3. Agrawala, V.S., *Ibid.*, pl. LI, A, 175, 176, 177, 246, 307, 308, p. 146.
4. *Ibid.*, also *Harṣacharita*, p. 56.
5. Dhavalikar, M.K., *op. cit.*, (1973), fig. X, 4, 5, 10, 11, 12, 13, p. 33.
6. *Ibid.*, fig. XII, 13, p. 39.
7. *Amarakoṣa.*, 2, 6, 117-119.

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with the present maxi-type of garment, worn usually by the fashionable ladies. It is sometimes combined with *dupaṭṭā*, shown hanging on the left side (fig. 29,20). In another example a lady wears what appears to be a tunic with round neck reaching upto the knees (fig. 29,21). The nature of sleeves cannot be determined in the figure.

The figure of a dancing girl from Sarnath[1] is shown wearing a short frock-like garment, which is open on the left side and reaching the mid thigh. A pleated *dupaṭṭā* resting on the arms is also shown. However, we fail to find a parallel to this, at Rajghat.

Some of the females of Varanasi covered only the breast region during the period by coloured[2] and decorated of breast-bands[3] or *Kucha-paṭṭikā*. Simple and decorated variety of breast-bands are represented at Ajanta also.[4] Besides these, veil was also used sometimes, as suggested by the female figurines shown with pitchers on their heads (fig. 29, 22, 23). Similar figurines are identified elsewhere as milk-maid.[5] The lower portion of the figurines is invariably broken, and hence no idea regarding the lower garment can be had. The illustrated figure shows a *dupaṭṭā* like garment on the head in a manner which is presently known as *oḍhnī*. One end of the *oḍhnī* comes through the right-arm pit in a most naturalistic manner (fig. 29,22) and is shown inserted in a close-fitting blouse. It is interesting to note that a similar figure housed in the Lucknow museum is shown wearing a doubled up skirt or '*ghāghrā*' with a blouse and a *dupaṭṭā* over her head. Since all the terracotta figurines of Rajghat are incomplete, it is difficult to ascertain whether the '*ghāghrā*' formed the part of the attire along with the *dupaṭṭā* and blouse here also. It may, however, be added that the above discussed female attire is not a feature of any professional class of women today in the region of Varanasi.

Male Costume

Lower Garment

Different kinds of lower garments for men have been observed. An important sewn garment emerged during the period is knickers or *jaṅghiā*, depicted in several

1. Ghurye, *op. cit.*, figs. 192-193.
2. Agrawala, V.S., 'Rajghat Terracottas,' *JUPHS*, vol. XIV, pt. 1, (1941), pp. 1 ff. Breast band is indicated in black colour.
3. Srivastava, S.K., *op. cit.*, fig. 567.
4. Motichandra, *op. cit.*, (1973), figs. 146, 161. The fan bearer and drummer also show similar dress. See also Dhavalikar, *op. cit.*, (1973), fig. X, 10, p. 33. He describes it as *stanottarīya* and suggests that it was tied at the back.
5. Motichandra, *op. cit.*, (Saṁ. 2007), fig. 213, p. 125 also Ghurye, *op. cit.*, fig. 95.

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terracotta figurines. It is probably *Satulā* of literature.[1] These are representations of briefs or what may be described as small *Jaṅghiās*, which are closely fitted to the body (fig. 29,24). Like the modern ones, the cutting of the lower end of the specimens is somewhat semicircular along with a band or *paṭṭa* on each leg. Smaller variety can also be seen in the type. A hunter is shown wearing a similar lower garment in the Ajanta paintings also.[2] Another variety (fig. 29,25) which is comparatively longer and reaches approximately upto the mid thigh is also met with. However, the lower end in this case is horizontal and not semicircular, as seen in earlier specimens. Similar variety is also reported from Ajanta,[3] Where a female door-keeper is shown in the comparable lower garment. The contemporary literature also confirms the use of *jaṅghiā* both by men and women.[4] The *jaṅghiā* reaching down the knees was also noticed (fig. 29,26). Similar variety is found at other place also.[5] Children are also shown wearing simple *jaṅghiā* or halfpant like lower garment in some of the terracotta figurines of Rajghat (fig. 29, 27). The band noticed on the lower end of the garment referred to earlier is absent in this case. These are sometimes marked by vertical bands in alternating colours[6] and can also be traced at Ajanta. In all these cases the upper part of the body of the figure is left bare. According to Sahay, this dress was popular in the north-eastern region among the people of different walks of life, including the royal personage, dancer and musician.[7] But our evidence suggests that it was popular only among the common people, and worn exclusively by man. This, in fact, appears to be the most common dress to cover the lower part of the body.

Another variety is a *dhotī*-like lower garment, which differs from that of the preceding period in the mode of wear. A soldier-like figure wears a short *dhotī* reaching down a little below the knees. A small piece of cloth has been simply wrapped round the waist in this case, without any gather or pleats (fig. 29, 28). The garment appears to be thin and transparent, as the contours of the legs are clearly visible. Dhavalikar[8] is of the view that in wearing such a *dhotī* some undergarment is essential to put on. It is tied with a girdle made of pearls or

1. Agrawala, V.S., *Harṣacharita*, p. 152. *Satulā* was a dress, which was worn above the knees, and that is why it is known as *ardhajaṅghikā* or *ardhajaṅghālā*. Agrawala suggests it to be *jaṅghiā*.
2. Motichandra, *op. cit.*, (Saṁ. 2007), fig. 324, p. 195.
3. Dhavalikar, M.K., *op. cit.*, (1973), figs. X, 9, XI, 13, pp. 33 and 35.
4. *Chaturbhāṇi* (*Guptakālīna Śṛṅgārahāṭa*) Translated and Edited by Motichandra and Agrawala, V.S., pp. 72 and 141.
5. Motichandra, *op. cit.*, (Saṁ. 2007), fig. 378, 379, 380, p. 218.
6. Agrawala, V.S., *op. cit.*, (1941), pp. 1, ff.
7. Sahay, Sachidanand, *Indian Costume, Coiffure and Ornament*, pp. 18-20 and 24.
8. Dhavalikar, M.K., *op. cit.*, (1973), p. 25.

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beads. The dagger[1] is secured by a *Kamarabanda.* As per the testimony of Bāṇa,[2] the new dress of Puṣyabhuti was fastened by a golden girdle in which the dagger was secured. There are references in *Kādambarī*[3] also where the daggers, secured in the waist band of the servants and the masters, have been described. In another form the *dhotī* is extended up to the knees (fig. 28, 29). It is wrapped round the waist and one of its end is collected in the front, while its lower end has been pulled between the legs tightly and tucked in at the back in such a manner that the pleated portion comes from just under the divide of the buttocks. This mode of '*dhotī*-wear' is still current in the region among the working class. The additional item noticed on the figure is the use of a rope type of *kamarabanda* (waist band). The rope has been obliquely wrapped round the lower part of the body, one side of which lies near the right knees, while the other rests on the left hip. The *kamarabanda* is very loose and in no way supports the garment. This type is referred to as *kalābuka* by Motichandra.[4]

The *dhotī* or waist cloth worn possibly in the same fashion, as referred to above, but without the use of *kamarabanda* is also attested to by the side view of a male figure, shown in a running posture (fig. 29, 30). Sometimes the *dhotī* reaches down to the ankles also with an ample pleated portion falling gracefully infront (fig. 29, 4). This is an example, a parallel of which can be found in the present day '*dhotī*' worn by the upper classes of society. There is also an evidence for a long *dhotī*, reaching a little above the ankles. The dangling end of the left side of the illustration (fig. 29, 32) may be interpreted as a *dupaṭṭā* which too might have been worn by a select people. Another man holding an indeterminate object in his right hand also appears to be dressed in a *dhotī*-like lower garment, but the mode of wear is difficult to determine, as the lower part is missing (not illustrated). There is still another figure wearing a *dhotī*, which is possibly tied round the waist with a belt. His head is covered with a scarf (fig. 29, 31).

Kaupīna or *laṅgoṭī* (fig. 30, 1, 2, 3) is the other kind of lower garment, which finds representation in some of the male terracotta figures. In this case, a piece of cloth has been tied round the waist and the remaining end hanging piece in the

1. The words *asidhenukā asiputrikā* or *khaḍgadhenukā, etc.*, were the words used for dagger in those days, as recorded by Bāṇa. Male figurines with daggers are also reported from Ahichchhatrā. (Agrawala, V.S., *op. cit.*, (1947-48). p. 149, fig. 188.) Similar type of dagger is noticed at Ajanta also. (Dhavalikar, M.K., *op. cit.*, (1973), fig. XXVII, 15).
2. Agrawala, V.S., *Harṣacharita*, p. 60.
3. Agrawala, V.S., *Kādambarī*, pp. 43 and 99.
4. Motichandra, *op. cit.*, (Saṁ. 2007), p. 38. There is reference of *Kamarabanda* in *Chullavagga*, their different names have been mentioned on the basis of their shape. The various mode of wearing *kamarabanda* have been shown in the Kushāna sculptures of Mathura (p. 114, fig. 180-184). In Gupta period its depiction is noticed in Ajanta Art (p. 187, fig. 229, p. 190, fig. 300, p. 195, figs, 324-325). All references taken from Motichandra, *Bhārtīya-veśabhūṣā*.

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front has been drawn between the divide of the buttocks and tied to the strip shown round the waist. The *laṅgoṭī* at times is also embroidered with flower design and is associated with a girdle mode of cylindrical beads (fig. 30, 2). Similar dress is worn by a tribal man in the Ajanta paintings.[1]

A somewhat different lower garment, which can hardly be grouped under any of the above categories, is also found depicted in some of the specimens. It is a narrow loin cloth, loosely wrapped round the waist, sometimes also associated with a scarf, which is simply inserted in the upper part of the loin cloth and hangs down to a little above the knees, (fig. 30, 4). In one instance atleast, it is secured by a single stringed girdle made of beads (fig. 30, 5). That the loin cloth was also decorated at times by horizontal bands is attested to by some figures of Rajghat, described by S.K. Srivastava.[2]

Upper Garment

Except a few, most of the male figures do not show any dress on the upper part of the body. The study revealed four types of upper garment, namely, tunic, coat, *kūrpāsaka*, waist-band, and scarf or *dupaṭṭā*. The male tunic represented in the period is simple and closely fitted on the body. None of these shows any opening in the front, and all are devoid of any kind of embroidery. Its simple representation may suggest that it was used mostly by the common people. The garment roughly corresponds to the tunic (fig. 28, 15, 12, 13, 14) worn usually by the females of the preceding period. The tradition continued in the Gupta period with a slight change in the shape. It appears that the type, when used by the females, as seen in the preceding period, is broad and loose in the lower half like a frock, but with a slight change the same becomes the tight fitting dress of men and gives an appearance of a *kurtā*. A tunic is combined mostly with a scarf or *dupaṭṭā* either hanging down on the left or the right side. The scarf never extends beyond the knees and in no case it is noticed on the shoulder or across the chest. The tunic in the period under discussion is short reaching a little below the waist (fig. 30, 6), though a longer type is sometimes also noticed (fig. 30, 7). The above figures come under the worshipers class of Agrawala.[3]

A standing male figure, holding a baton of staff (*Yaṣṭi*) in his hands, (fig. 30, 8) wore comparatively a long tunic, with a scarf hanging down on the right side. Similar figurines have been identified as palace attendants by

1. Dhavalikar, M.K., *op. cit.*, (1973), p. 37. Even now *laṅgoṭī* is used by aboriginals in Maharashtra.
2. Srivastava, S.K., *op. cit.*, figs. 564, 575.
3. Agrawala, V.S., *op. cit.*, (1947-48), pp. 148 ff. The male worshipers (*Upāsaka*) were common at Ahichchhatrā, Kumrahar and Rajghat.

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Agrawala.[1] Soldiers[2] have also been depicted wearing a similar tunic (*Kañchuka*) (fig. 30, 9). In such cases, a waist band is tied in a looped knot to which a dagger is secured. The description of foot soldiers by Bāṇa in the Harṣacharita[3] tallies remarkably with the illustrated specimen.

Agrawala[4] described a terracotta figure of a *lubdhaka* or hunter from Rajghat, who puts on a full-sleeved long heavy coat, which is unbuttoned on the chest. To the best of our knowledge, it is the only example of a long unbuttoned coat of the Gupta period from Rajghat.

The other distinctive garment for men appears to be *Kūrpāsaka.*[5] It may, however, be emphasised that the dress was hardly common among the masses. The only example from Rajghat is a standing male figure who wears this garment with a conical cap (fig. 30, 10). While describing the dress of the king, Bāṇa[6] mentions the name of *Kūrpāsaka*. Kalidasa[7] has used the word in the sense of a *Cholī*. According to *Amarakoṣa*,[8] it is a *Cholī* or *kurtī*-like garment. This may be compared, to some extent, with the modern *baniyāin* or *ganjī*. Motichandra[9] is also of the view that it might have been something like half sleeved *mirzaī* or *gañjī*-like dress. Agrawala[10] compares the type with the modern waist-coat and suggests it to be of Central Asian origin. He further opines that the dress might have been introduced in the country by the Hūṇas.[11] It was probably the dress of ministers, servant class, musicians, horse and elephant riders, as revealed by the depictions of Ajanta and Bhūmarā temple.[12]

The above study of the dresses reveals that they have undergone various

1. Agrawala, V.S., *ibid.*, fig. 189, 192, 193, pp. 148-49.
2. *Ibid.*, p. 149. Similar specimens are found from Ahichchhatrā also and identified as foot soldiers.
3. Agrawala, V.S., *Harṣacharita*, p. 20.
4. Agrawala, V.S., *op. cit.*, (1941), pp. 1, ff., also Srivastava, S.K., *op. cit.*, fig. 584.
5. It was the dress of both male and female reaching roughly upto the waist. It was very much like a *Cholī* for the ladies and *mirzai* or *fatuī* like garment for the males. The name *Kūrpāsaka* was given because its sleeves were short and were always above the elbow. Agrawala, V.S., *Harṣacharita*, p. 155.
6. Agrawala, V.S., *Harṣacharita*, p. 80.
7. *Kālidāsa granthāvalī*, ed., Chaturvedi, Sita Ram, *Ritu.* 4, 17, 5.8.
8. *Amarakoṣa*, 2, 6, 117.
9. Motichandra, *op. cit.*, (Saṁ. 2007), p. 161.
10. Agrawala, V.S., *Harṣacharita*, p. 155.
11. In the whole of Mangolia, Chinese Turkestan and Pakhtoon, the use of *fatui* was very common. *Fatuī* or *fītūrī*, *banda* or *Kabjā* and *cholī* are originally the same dress which became popular as *Kūrpāsaka* in the Gupta period. Agrawala, V.S., *Harṣacharita* men Varṇita Bhārtīya Vastra, *NPP* Vol. 4 years 57. (Saṁvat. 2009), pp. 309 ff.
12. Motichandra, *op. cit.*, (Saṁ. 2007), p. 198, fig. 332, p. 206, fig. 354, p. 202, fig. 342, p. 191 fig. 312, p. 194, fig. 317 respectively.

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changes during the different periods of history. At times these changes appear to be more marked. Though each period had its own dressing patterns, yet the '*sārī*' remained the chief article of female costume in all the ages. Moreover, it was common among women of all the classes. The women of the Śuṅga age used *paṭakā* over the *dhotī* hanging between the legs. This fashion was prevalent at Bharhut and many other places, but it was hardly common among the ladies of this region, as is evident by a very limited number of examples of this garment at Rajghat. The '*sārī*' was mostly held by elaborate girdles which became less popular in the succeeding periods. Sewn and buttoned garment makes its first appearance during this period, as it is attested to by a solitory female figurine (fig. 28, 15). When we come to the Kushāṇa period (between Ist and IIIrd Century A.D.), we notice striking changes in the dress patterns. Along with *sārī*, many sewn garments now come into vogue. Among these, the tunics and skirts of different types are noteworthy. The literary evidence that Kāśī was manufacturing embroidered cloth also appears to be supported by the archaeological evidence during the period. In the Gupta period the use of sewn garments appears to have increased. Gown reaching the ankle's length which may very well be compared with a modern maxi, long coat, pleated long skirts, *Jāṅghiā* or Knickers, tunics of various sizes and petticoats are some of the examples of sewn garments. It is during the Gupta period that we find evidence of coloured garments like breast band and '*Sārī*.' The *sārī* still remains the commonest type of lower garment for women, but the mode of wearing it clearly differs from that of the preceding phase. The use of scarf or *dupaṭṭā*, along with tunic, *jaṅghiā* and *Kūrpāsaka*, is an interesting combination of indegenous and foreign elements in drapery. The skirts of the preceding period are now out of vogue and seem to have been substituted by petticoat, *lahangā* or *ghāghrā*-like garments. Similarly the use of belts is also discontinued during the period. The loin cloth, which is simply wrapped round the body appears to be one of the prevalent dresses of the common masses. It is frequently depicted in the Ajanta paintings also.

The *dupaṭṭā* or *uttarīya* is another important garment, which seems to have been used from Circa 200 B.C. onwards. According to the Indian tradition, an *uttarīya* is the mark of decency, and every male and female, participating in any important socio-religious performance, is expected to put it on for maintaining the dignity of the occasion. However, the archaeological evidence unearthed from Rajghat does not seem to indicate that the members of both the sexes used it in all the periods. The depictions on terracotta figurines appear to suggest its two types—the longer variety which is often pleated and sometimes also hangs down the knees and the shorter one, which is more like a scarf and is simply thrown near the breast region. It is important to note that the *uttārīya* has mostly been used in such a manner that it does not cover any vital parts of the upper body, and its use appears to be more customary rather than functional. It may

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also be pointed out that an *uttarīya* is most commonly seen either in the religious figurines or in those which are profusely ornamented, perhaps representing the members of the upper classes of the society. Besides, it was also used by Bhikṣuṇīs and palace attendants. It may be presumed that an *uttarīya* was rarely included in the common man's dress who preferred to keep the upper part of his body generally uncovered.

It has generally been agreed upon that north India came in direct contact with the foreign cultures like those of Greeks, Scythians, Parthians, Kushāṇas, *etc.*, from circa 2nd Century, B.C. onwards. The foreign intrusions might have resulted in the diffusion of some of their culture patterns in Indian society. Besides other aspects of Indian culture, the foreign influence appears to be particularly marked on the dress patterns of the region. That Varaṇasi was in contact with some of the western cultures during 1st—3rd Century, A.D. is sufficiently attested to by the discovery of a few Graeco-Roman tokens from Rajghat, which were subsequently described by Krishna Deva. It is interesting to note that at least one female figurine of Rajghat belonging to the Śuṅga period puts on such a sewn and buttoned dress which betrays foreign influence. The number of such dresses seems to have increased during the Kushāṇas and the Gupta periods. In this connection, particular mention may be made of some varieties of tunic, skirt, long heavy coat, gown, *etc.*

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5

Ornament

Decorating the human body with ornaments and jewellery appears to have been a common practice of man through the ages. If the literary tradition is to be relied upon, the ancient Indians paid particular attention to ornamentation, and, the inhabitants of ancient Varanasi also did not lag behind. However, the actual specimens of ornaments and jewellery, recovered from the excavations at Rajghat, are not many. This does not mean that the people of this place did not attach much importance to ornaments and jewellery. Even a cursory glance at the huge collection of terracotta figurines from the site will convince any body the importance attached to decorating the human body. The heavily bedecked figures, with ornaments covering the body from head to ankle, are representative of the wide range of decorative items prevalent during the different periods. It is only logical to infer that these figures have been decorated in accordance with the contemporary fashions. Besides the evidence of the terracotta figurines, there are ample references to ornaments and jewellery in the various classes of the ancient Indian literature, which throw a flood of light on the prevalent types, as well as, the material used in their manufacture. Thus, all the three types of evidence, *viz.*, the actual specimens of ornaments from the excavations, the depiction of jewellery on the terracotta figuries, and references to them in ancient Indian literature, have been taken into account while discussing the nature and use of ornaments and jewellery of ancient Varanasi. The approach has been first to classify the different categories of ornaments. This is followed by a short discussion on the historical development of the various ornament-types. This classification takes its cue from the literary tradition which gives the names of the various types of ornament. As far as possible, the textual names have been given. It is against this background that the specimens of jewellery occurring by itself or seen on the numerous figurines have been discussed.

Forehead ornament

The forehead ornament was being used by the women of Varanasi. This is a very celebrated ornament, for which references in ancient literature are fairly numerous.

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In the works of Kālidāsa[1] terms like *chūdāmaṇi* and *chūdā-ratna* refer to this ornament. Similarly words like *Sīmanta-chūdāmaṇi*[2] and *chaṭulā-tilakamaṇi*[3] occurring in the works of Bāṇa denote forehead ornament.

At Rajghat, both the simpler variety, as well as, the more complex ones are depicted on the figurines. There is a solitary specimen of a terracotta figurines, representing this ornament, from the late phase of the Period III. It, however, assumed popularity in the succeeding Period IV. The study reveals the following types :

Period III (Late phase)

1. A circular pendant is depicted on the forehead. It is suspended from a twisted single string, which is shown on the parting of the hair below which is seen row of four discs. These discs apparently made of metal were studded with minute gems, as indicated by the dots (fig. 31, 1).

Period IV

2. A circular pendant beset with a jewel in the centre, reaching the forehead, shown suspended from a string, which is tied to the top knot of the hair (fig. 31, 2).

3. Similar as above, but differs in having simple pendant without any jewel (fig. 31, 3). The present and the preceding type No. 2 possibly correspond to *Lalāṭikā*[4] variety.

4. Same as type 1, but differs in having an oval shaped pendant. The ornament is secured with the help of strings, which are shown running on the two sides and across the top-knot (fig. 31, 4). Sometimes, these circular pendants are depicted without any strings.

5. Forehead ornament depicted on the parting of the hair, and it appears to have been tied with the help of a string at the top knot (fig. 31, 5).

6. Pendant made of rectangular beads is shown on the parting of the hair. A bead-string, fringing the hair on the forehead, is also shown (fig. 31, 6). This type, without a bead-string on the forehead, is also seen wearing by the females (fig. 31, 7).

7. A string of beads or pearls shown at the parting of hair. This type appears to be popular with the females of ancient Varanasi. The beads or pearls of the

1. Kālidāsa granthāvalī, Raghu, XVII-28, kum, VII-35, VI-81, XVII-55.
2. Agrawala, V.S., *Kādambarī Eka Sāṅskṛitika Adhyayana.*, p. 185. The *sīmanta-chūdāmaṇi* is worn by Kādambarī and described as coming from the hair parting.
3. Agrawala, V.S., *Harṣacharita*, p. 24.
4. *Amarakoṣa*, 2, 6, 103.

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string gradually diminish in size (fig. 31, 8), but, sometimes, they are of equal size also (fig. 31,11). These strings are fastened to the hair probably with the help of a hook. The string, at times, has a circular pendant. This type of forehead ornament is known at other sites of the region from even an earlier period.

8. A floral medallion with two distinct varieties. In one case, it consists of a circular piece, in which the floral pattern is shown by six to seven circular gems, inlaid on the circumference of the central piece. The inlaid gems are either of equal size, or, in some cases, the central piece is larger than the others (fig. 31, 15, 16). The second variety probably consists of a circular metal piece, with the petals depicted by cutting small bits of metal (fig. 31, 10).

9. In another case, the said design appears to have been cast in a mould. It is probably tied with the help of the bead or pearl string, the faint traces of which can be noticed (fig. 31, 12).

10. A circular forehead ornament, composed of rows of bands or pearl strings. There appears another possibility also that the beaded design may have been embossed or made on metal. The women presumably of higher status decorated their hair with strings of pearls and beads (fig. 31, 13). Mostly these strings are shown near the knot of the hair, but, at times, they are depicted side-ways also. In a single instance, a lady is shown wearing a *Mukuṭa* (crown) on the forehead (fig. 31, 9), suggesting her higher status in the society. The string of beads or pearls, fringing the hair on the forehead appears to be a fairly popular ornament.

Ear Ornament

The ear ornaments are abundantly represented in the terracotta figurines of Rajghat. There is hardly any figure, which is shown without this ornament. Quite a few discs made of bone, semi-precious stones and terracotta have also been found in the excavations from different levels at Rajghat (see pl. XXIX). The earliest actual ear ornament, in the form of a disc, is obtained from the Period I. These discs of stone have been termed as 'weight'.[2] They are reported from the early historic period from various sites in the Gangetic—valley and other places in India. Similar discs of glass are also known from Kolhapur, Kondapur, Nasik, Nevasa, Maheshwar and Navdatoli.[3] However, there is no unanimity regarding the use of these discs and the possibility of their use as ear ornament has frequently been conjectured, specially in case of those specimens, which are smaller in size, and have side grooves. Disc-shaped ear ornament akin to our specimens can also be traced in

1. Gupta, P.L., *Patna Museum Catalogue of Antiquities* (1965), Arch., No. 8778, p. 227.
2. Lal, B.B., *op. cit.*, (1954-55), pl. L. II, p. 90.
3. Sankalia, H.D., *et. al.*, *op. cit.*, (1958), pp. 218-219.

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the Amaravati[1] and Gandhara[2] sculptures.

Terracotta specimens were also in vogue practically in all the periods. "They are all disc-shaped ornaments with concave sides, possibly for a proper grip in the ear-lobes."[3]

Besides these, reel-like objects could have also been used as ear ornaments. The only difference between these and the earlier mentioned ones is that, in the former case, "the two ends have concentric circles beautifully carved with the help of moulds."[4] Tearing of the ear lobe appears to be necessary to insert disc or reel-like object in the ear lobe.

The regular delineation of ear ornaments in the terracotta figurines can be traced back to the Period III and onwards. The usual ear ornaments for the ladies were rings (fig. 32, 1) and a circular disc like ornament (fig. 32, 2). In case of men, the type remained the same, but, at times, the size became a little smaller than the usual. This feature is noticed mostly during the Period IV. An important point to be noted here is that sometimes two different types of ornaments are noticed in the two ears. The custom of wearing ear ornaments in this fashion might have started from the early phase of the Period III in Varanasi, as a female figure, from this phase, is shown wearing disc like ornament in the left and a ring in the right ear (fig. 32, 3). The similar practice was continued in the late phase of the Period III, and the succeeding Period IV, where the lady has worn *Chakra Kuṇḍala* in the left and disc like object perforated centrally in the right ear (fig. 32, 4). In another example, a *daṇṭapatra* in the left and a simple ring in the right (fig. 32, 5) are noticed. This fashion was in vogue at Ahichchhatra also. It appears that the ornament worn in this style was common at Rajghat and Ahichchhatra and conforms to the descriptions given in the *Harṣacharita*.[5] It has been observed that the fashion of wearing ornaments in the upper lobe of the ear was not in existence during any period of our study in Varanasi.

The people belonging to the Periods I and II used disc-like ear ornaments made of terracotta and bone (pl. XXIX). The study of terracotta figurines revealed the following types during the Periods III and IV of our study.

1. Ear-rings of various sizes were very commonly worn both by males and females of Varanasi. Their earliest depiction is noticed in the early phase of the Period III, which gained its popularity in its late phase and the succeeding *i.e.*, Period IV. Usually, all the specimens are found, except for a single specimen

1. Sivaramamurti, C., *op. cit.*, (1956) pl. VIII, 1.
2. Krishna Murthy, K., *op. cit.*, fig. VII, 15, p. 33.
3. Narain, A.K., and Singh, P., *Excavations at Rajghat*, Pt. III, Varanasi, (1977), p. 67.
4. *Ibid.*, p. 67.
5. Agrawala, V.S., *Harṣacharita*, p. 60.

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from the Period IV, which is roughly oval in shape (fig. 31, 6). It has been noticed on a male figure. Sometimes more than one ear rings appear to have been used (fig. 32, 7). This fashion seems to be prevalent during all the periods under study. It is variously referred to as *Karṇavalaya* and *Kuṇḍala*, respectively by Bharata Muni[1] and Kalidasa.[2] These rings are presently known as bālī.

2. Circular ear ornaments were worn by both the sexes (fig. 32, 4, 8). Similar ear ornament has been identified by Agrawala[3] as round *tāṭaṅka Chakra Kuṇḍala* (wheel-like ear ring). Joshi[4] described it as *Chakra-kuṇḍala*. It finds mention in the works of Kālidāsa also.[5] This type is also represented from an early phase of the Period III and onward.

3. Disc-like ear ornament which has perforation in the centre. The central perforation was intended perhaps for fastening the ornament to the ear. They are of various sizes (fig. 32, 9, 10, 11, 12). The type is absent in the early phase of the Period III, and appears to have been introduced in its late phase. This is possibly an improvement over simple disc-like ear ornament. It was a favourite ornament of the females in the late phase of the Period III, and at times, it was shown decorated (fig. 32, 13). The type becomes very small during the Period IV, particularly in the case of male persons (fig. 32, 14, 15). Sometimes, it appears to have been studded with gem in the centre (fig. 32, 14, 15, 16). It can been compared with the present day ear ornament, known in the region as *tarkī*.

4. Ear ornament decorated lavishly with some design having pearl tassels (fig. 32, 17). The type appears to be confined to early phase of the Period III, and did not continue in the succeeding periods.

5. Pearl or bead string, round in shape, is a rare variety, and is confined to the late phase of the Period III. A string connected with it is also shown possibly meant to hold the ornament in position (fig. 32, 21).

6. Ear ornament depicted with three circular holes in a row on the top, having four divisions shown below it (fig. 32, 23).

7. Leaf shaped ear ornament with circular object at the top (fig. 32, 18). This may be identified with the *patra karṇikā*[6] variety and has been noticed in the Period IV.

8. Crescent shaped ear ornament (fig. 32, 19) is a rare type, noticed only

1. *Nāṭyaśāstra*, Vol. I, (tran.) Ghosh, Manomohan, Calcutta (1967), XXIII. 23-26.
2. *Kālidāsa granthāvali*, *op. cit.*, *Ṛitu*, II-20, III-19.
3. Agrawala, V.S., *op. cit.*, (1947-48), pp. 143-144.
4. Joshi, N.P., *op. cit.*, figs. 601, 602, p. 190.
5. *Kālidāsa granthāvalī*, *op. cit.*, *Kum.* IX-23.
6. *Nāṭyaśāstra*, XXIII, 23-26.

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during the Period IV. Roughly similar ear ornament is noticed at Ajanta,[1] and identified as the *mṛiṣṭakuṇḍala*. This type is also noticed in the sculptures of Gandhara[2] and Amaravati.[3]

9. A ring attached to a circular metallic piece, which has a perforation in the centre probably for fastening (fig. 32, 20), This is a solitary specimen depicted on a female figure.

10. This ear ornament is in the form of a flower, possibly suspended by a wire (fig. 32, 22). This may be identified as *Karṇotpala* frequently mentioned in the works of kālidāsa[4] and Bāṇa.[5]

The above four types (7-10) have not been noticed in a context earlier than the Period IV, and hence may be regarded as an innovation of the craftsmen during the Gupta period.

Neck Ornament

The neck ornaments delineated in the terracotta figurines of Rajghat revealed great many varieties. The men generally used simpler types, but the women used such ornaments of several varieties. The antiquity of this ornament goes back to the earliest settlers, as suggested by the occurrence of beads of clay, paste, chert and bone. But, the actual size and the form of the neck ornament, prevalent during this period is not known, as the terracotta figure representing this ornament has not been found in the excavation.

In the succeeding Period II (c. 600 B.C. to 200 B.C.) quite a few representations of this ornament, belonging to the necklet variety, have been found. In a single instance, a necklace, worn in the *upavīta* fashion by a female figure, is seen (fig. 32, 24). Quite a few of these representations do not show the use of beads, although a variety in the shape and materials of necklaces has been noticed. They appear to be metal specimens. Sometimes, the women are shown with two sets of ornament-one close to the neck and another reaching upto the breast region or below it, whereas, the men used only one set. The occurrence of a large number of beads and pendants, made of different materials, is a proof of the popularity, that was attached to this particular ornament. These are of different lengths and made of one to five strings. They were being used by the people of all the classes.

1. Dhavalikar, M.K., *op. cit.*, (1973), p. 66, fig. XVII, 28. Sivaramamurti discusses varieties of *Kuṇḍalas* out of which "The *mrīshta Kundala* is a plain variety, highly polished and shining." Sivaramamurti, C., *Sanskrit Literature and Art-Mirrors of Indian Culture*, MASI no. 73, New Delhi, (1970), p. 59.
2. Krishna Murthy, K., *op. cit.*, p. 31, fig. VI, 9.
3. Sivaramamurti, C., *op. cit.*, (1956), p. 108, pl. VIII figs. 5 and 23.
4. *Kālidāsa granthāvalī*, *op. cit.*, *Raghu*, VII-26, *Kum.* V-47.
5. Agrawala, V.S., *Harṣacharita*, p. 158, pl. 20.

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The common people used the necklaces made up of inexpensive and readily available materials, as is evident by the occurrence of bone, shell, terracotta and glass beads. It is likely that the people belonging to upper class used these ornaments of costly metals and semiprecious stones. Some single-stringed and small-sized necklaces made of beads or pearls are depicted close around the neck, or a little below it. The latter may be identified with the *lalantikā* of *Amarakoṣa*[1] The other necklaces hang low on the chest or even below it.

The neck ornaments, depicted in the terracotta figurines, have been classified periodwise into the following types :

Period II

1. Single stringed necklace, indicated by incised circles of varying sizes, hanging down below the breast region. These circles are further centrally decorated by circlets. They appear to be metal discs, and the circlets shown in the centre may be taken as gems, which were studded on the metal surface (fig. 34, 4).

2. Two necklaces worn together as seen on a female figure.[2] The longer one appears to be embossed with some design, and having a rectangular object in the centre. The smaller one seems to be simple and without any decoration (see pl. XXVIII, C).

3. Four stringed necklace, depicted merely by incised lines. It is worn by a male figure (see pl. XXVIII, D).

4. The necklace is shown in the form of a clay band, incised with oblique lines (see pl. XXX, D).

Period III

5. Single stringed necklace (*Ekāvalī*). It is of two types, one was worn near the neck with a pendant in the centre, and the other hanged down sufficiently below. A female figure is shown wearing both these types (fig. 32, 25). These are composed of beads or pearls of equal size. Similar ornaments are reported from the Kushāṇ period settlements in Bihar.[3]

6. Three to four stringed necklaces hanging down to the waist region. It is composed of three to four rows of beads or pearls, running parallel to each other (fig. 32, 26, fig. 33, 1). This appears to be the *mahā-hāra.* The three stringed

1. *Amarakoṣa*, 2.6.103.
2. The specimens nos. 2, 3 and 4 come from the Bharat Kala Bhawan collection. All these have been assigned to the Mauryan period on stylistic ground.
3. Gupta, P.L., *Patna Museum Catalogue of Antiquities*, Archaeological nos. 6633, 4369, 6062, 7996.

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necklace is used with another neck ornament, which lay very close to the neck (fig. 33, 2), and perhaps corresponds to the present *Hansulī* (see pl. XXX, D).

7. A necklace composed of five stringe with a row of rosettes. The four strings are made up of tiny globular beads or pearls and one string is composed of rosettes (fig. 33, 3), Some beads of glass, described as star-shaped, are also available from the excavation. Similar ornament is worn by a female deity, associated specially with rain and fertility.[1] Similar figurines have been reported from Kauśāmbī.[2] Ahichchhatra,[3] Bangarh[4] and some sites of Bihar. These multi-stringed necklaces might have been used by the more affluent members of the society.

8. String with roughly cylindrical bead in the centre flanked by tiny spherical beads (fig. 33, 4).

9. String with only three beads. The central piece is of a larger size and roughly cylindrical in shape, while the other two are spherical and shown at intervals (fig. 33, 5).

10. A necklace composed of our strings or chains, having three big cylindrical beads of approximately equal size shown vertically at intervals (fig. 33, 6). It is worn by a lady, who is dressed presumably in a foreign costume.

11. Short necklace studded with pearls or precious stones in a row and partially thrown on the shoulder (fig. 33, 7). Sometimes, a comparatively longer variety, having vertical or oblique decoration, loosely thrown on the shoulder, has also been noticed. Both these types are worn generally by the females. It continued in the Gupta period and was noticed on the male figures too. In this case the necklace is decorated with circular precious stones or beads (fig. 33, 8).

12. Neck ornament with leaf design. The females wear two types of neck ornaments, one close to the neck, and the other reaching down to the waist in the *upavīta* fashion. The former is lavishly decorated with six vertical rows of leaf design and comes down upto the mid region. This may be compared with the modern *gulubanda*, worn in this region (fig. 33, 9).

13. The necklace of the female figure is represented by an applied band of clay, which is shown hanging down upto the mid region. The ornament is shown decorated with several vertical and one horizontal linear incisions (fig. 33, 10). Identical type is reported from Vaiśālī[5] from the corresponding level. The clay

1. Saraswati, S.K., *A Survey of Indian Sculpture*, (1975), p. 116.
2. Kala, S.C., *Terracotta Figurines from Kauśāmbī*, pl. VC, XIVA, 1.
3. Agrawala, V.S., *op. cit.*, (1947-48), pl. XXXIII, fig. 23-25.
4. Goswami, K.G., *Excavations at Bangarh*, pl. XXI, B, fig. 1, 5.
5. Sinha, B.P., and Roy, Sita Ram, *op. cit.*, 1969), pl. XLIII, 6, 9 pp. 156-157.

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band suggests that the ornament was made of a broad flat metallic piece, the surface of which was adorned with the aforesaid design by engraving. Another longer ornament appears to be a chain or simple thread necklace. The thread necklace has been also noticed on the figures in Ajanta paintings.[1]

14. A multi-stringed necklace, having three rectangular plaques (pl. XXVIII, B). It corresponds precisely with the *triphalaka* variety, described by Kauṭilya.[2]

15. Three stringed necklace, indicated by three lines on the neck. It is worn by a female figure (fig. 31, 13).

16. Two types of necklaces are worn together in this case, the shorter one has a globular pendant in the centre and the other one has a long cylindrical pendant, which is further decorated with leaf pattern. It is noticed on a female figure (fig. 28, 15).

17. A long simple necklace, worn by a male figure is represented by a broad band of clay (fig. 33, 11, 12). Its shorter variety is also noticed.

18. A short necklace, having rosette design (fig. 33, 13), is worn by a female figure.

Period IV

19. One stringed necklace (*Ekāvalī*). The single stringed neck ornament made of beads or pearls is the *ekāvalī*, which gets frequent mention in the literatures Bāṇa often refers to this type of *Kādambarī*[3] and *Harṣacharita*.[4] Kālidāsa[5] refers to this ornament as *muktāvalī*. This type is mentioned in Amarakoṣa[6] as *Ekāvalī* and *Ekayaṣṭikā*. In Varanasi, it has its beginning in the late phase of the Period II, but it attained popularity during the Gupta age. This type of ornament has also been reported from several sites like Ahichchhatra[7] Rajgir,[8] kumrahar,[9] Ajanta[10] *etc.*

(i) An ekāvalī composed of spherical beads of pearls. Its central piece is the biggest, while the rest are of gradually diminishing sizes (fig. 33, 14). This is

1. Dhavalikar, M.K., *op. cit.*, (1973), p. 69.
2. Shamasastry, *op. cit.*, p. 77.
3. Agrawala, V.S., *Kādambarī*, p. 154.
4. Agrawala, V.S., *Harṣacharita*, p. 202.
5. *Kalidasa granthāvalī*, *op. cit.*, Raghu, XIII-48.
6. *Amarakoṣa*, pp. 2, 6, 105, 106.
7. Agrawala, V.S., *op. cit.*, (1947-48), pl. L, A, 156, p. 143.
8. Ghurye, *op. cit.*, pl. 231.
9. Altekar, A.S., Mishra, Vijaya Kanta, *op. cit.*, (1959), pl. XLIV, no. 1, p. 108, pl. XLVI, p. 116.
10. Ghurye, *op. cit.*, pl. 255.

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prakaṇḍaka type of necklace, which is mentioned by Kauṭilya.[1] Similar representation is noticed at Ajanta,[2] Ahichchhatra[3] and in the Gandhara[4] sculptures. Joshi[5] wrongly compared it with *Avaghaṭaka* variety of *Arthaśāstra.*

(ii) In this case the central bead is cylindrical and comparatively bigger than the rest (fig. 33, 15). Agrawala,[6] on the basis of literary text, suggests that it was made of sapphire (*Madhya indranīla*). The type is rarely noticed at Rajghat, but it is a typical feature of the Gupta period. It is worn by a female figure. This type, too, is reported from Ahichchhatra and Ajanta.[7]

(iii) Single stringed necklace made up of pearls or beads, all of which are of equal size (fig. 28, 9, fig. 37, 1, fig. 38, 7). This may be identified with *Avaghaṭaka* variety mentioned by Kauṭilya.[8] This type is noticed in the sculptures of Gandhara also.[9]

(vi) This type is similar to the above but in addition has a central piece consisting of a large sized pearl or bead. This may roughly correspond to *śīrsaka* variety mentioned by Kauṭilya[10] (fig. 33, 17). Similar neck ornament is also noticed on Gandhara figures.[11]

20. Double stringed necklace with beautiful central pendant coming down to the mid region. The string appears to be a chain like object, as there is no indication of beads or pearls (fig. 33, 18).

21. Long necklace profusely ornamented with gems. The ornament is represented by an applique band of clay, which is adorned with punched circlets. These circlets indicate that the ornament was inlaid with pearls or gems (fig. 33, 19).

22. Thread or chain necklace with a long cylindrical bead in the centre flanked by two sets of beads (fig. 34, 1). It is worn by a female figure. The thread or chain necklaces of the types 8 and 9 of the preceding period are continued. The beads of the later necklaces are comparatively bigger. Besides, the flanking beads

1. Shamasastry, *op. cit.*, p. 76.
2. Dhavalikar, M.K., *op. cit.*, (1973), p. 69, fig. XVIII, 15.
3. Agrawala, V.S., *op. cit.*, (1947-48), p. 146, pl. LI, 179.
4. Krishna Murthy, K., *op. cit.*, p. 36.
5. Joshi, N.P., *op. cit.*, p. 198.
6. Agrawala, V.S., *op. cit.*, (1947-48), p. 146, pl. L1, 178.
7. Dhavalikar, M.K., *op. cit.*, (1973), p. 70, fig. XVIII, 16. The central bead is mentioned as *nāyakamaṇi* and according to him it corresponds to *Yaṣṭi* variety of the *Arthaśāstra.* This seems to be correct as an ekāvalī, "with a gem in the centre is called Yaṣṭi." Shamasastry, *op. cit.*, p. 77.
8. Shamasastri, *op. cit.*, p. 76.
9. Krishnamurthy, K., *op. cit.*, p. 36.
10. Shamasastri, *op. cit.*, p. 76.
11. Krishnamurthy, K., *op. cit.*, p. 37.

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are decorated with dots, and, thus, resemble the etched carnelian beads, which are also available from the excavation (fig. 34, 2). A short chain necklace represented by a thin line is also seen on some of the female figurines (fig. 31, 2).

23. A few female figurines wearing ornate necklaces in the *upavita* fashion have also been observed. Their earliest representation comes from the Period II, but continued to occur in limited quantity upto the end of the 3rd Century A.D. The necklaces worn in an identical fashion are noticed at Bharhut,[1] Ajanta,[2] Ellora and in the terracotta figurines of North-East India.[3] This is probably *vaikakṣyaka*[4] of literature.

Period II (600 B. C. to 200 B. C.)

1. A necklace inlaid with minute gems worn in the *upavīta* fashion (fig. 32, 24).

Period III (200 B. C. to 300 A. D.)

2. The necklace with a triangular pendant is worn in the above fashion. The ornament is decorated with rectangular panels (fig. 33, 9).

3. The long necklace made up of beads or pearls may be identified with the type *muktā-yajñopavīta* (fig. 28, 11).

Torque (necklet)

There are not many illustrations of this ornament, but those, delineated in the terracotta figurines, revealed a pleasing variety. They were worn closely round the neck and used mostly by women and occasionally by men as well. They are variously known as *hansulī*, *Gulubanda*, and *tīka* in this region. The following varieties of depiction have been noticed :

(i) Worn with no other neck ornament

(ii) Worn alongwith a necklace or *hāra*

(iii) the torque and necklace are of the similar type representing a matching set.

From their delineations in the terracotta figurines, it appears that a majority of these were made of flat or circular metallic piece, sometimes embossed with design or engraved with oblique or vertical lines or inlaid with gems. They can be identified with the *graiveyaka* variety of Pāṇinī[5] and Amarakoṣa.[6]

1. Motichandra, *op. cit.*, (Saṁ. 2007), p. 70; also Joshi, N.P., *op. cit.*, p. 205.
2. Dhavalikar, M.K., *op. cit.*, (1973), pp. 71-72, fig. XIX, II. 12.
3. Sahay, Sachidanand, *op. cit.*, pl. XXXIII.
4. *Amarakoṣa* II, 6, 135.
5. Agrawala, V.S., *Pāṇinī Kālīna Bhāratavarṣa*, p. 137.
6. *Amarakoṣa*, 2, 6, 103.

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Period II (600 B. C. to 200 B. C.) :

1. A flat torque closely fitted to the neck. It is decorated with a row of vertical lines (fig. 34, 3).

2. A circular torque lay closely round the neck and studded with minute gems (fig. 32, 24).

3. A broad flat torque appears to be divided into three rows, all inlaid with minute gems. The ornament covered the entire neck portion. This is represented by a single example (fig. 34, 4).

4. A torque decorated with four vertical strokes (fig. 34, 5).

Period III

5. The female figure wears the ornament close to the neck.

It is embossed with a rosette and other design and bears close resemblance with the present neck ornament popularly known as *hansulī* (fig. 33, 2). Sometimes, it is shown hanging loosely near the neck and worn alongwith a necklace of one or three strands (pl. XXX, C, D.)

6. A flat torque embossed with vertical panels in a row. It is worn along with a necklace of three strands (pl. XXX, D).

Period IV

7. A plain torque without any decoration depicted closely round the neck (fig. 34, 6). Its thin variety is also seen (fig. 33, 18). Sometimes, it is decorated with oblique lines (fig. 34, 2), or studied with pearls or precious stones in a row (fig. 33, 19). In a single instance, it is coiled twice and worn by a male figure (fig. 34, 7). The simple variety might have been used by the middle class women of the society, while the richly ornamented specimens, alongwith the necklace, were used mostly by the upper class women.

Pendant

Thirty pendants of various materials were obtained from the excavations from different levels. They were perhaps used separately, or as necklace pendants. The earliest examples of two drop pendants come from the Period I. One is of quartz crystal and another one is of shell, in the form of *svastika*. A single specimen of milky quartz, hexagonal in shape, comes from the late phase of the Period II. The period between lst century A.D. and 3rd cent. A.D. is important for the introduction of certain new shapes, like birds and inverted drop pendants. Apart from this, terracotta pendants were also in vogue during the period. Among the types which deserve particular mention are those shaped like fish, conch shell

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and pillar. Besides these, some more new shapes in the succeeding period IV are noted. These include *triratna* pendant of green jasper, hook (?) shaped pendant of ivory and a circular tabular pendant of terracotta. It is interesting to point out that none of these types is depicted in the terracotta figurines of any period. The delineated types in the terracotta figurines are different from those of the actual specimens found in the excavation. The presence of terracotta pendants undoubtedly suggests that it was used by those people who could not afford to have specimens of semi-precious stones. Alternatively, some of these might have been used as talisman or charms, as distinct from ornaments.

The following types are found depicted in the terracotta figurines.

Period III

(a) A disc pendant appears having decoration of radiating lines and shown suspended in a thread or chain like object (fig. 34, 8). Disc pendant, studded probably with a single minute gem in the centre is another type known in the period (fig. 34, 9).

Period IV

(b) A disc pendant, fringed with pearls or beads, is shown suspended in thread or chain like object (fig. 34, 10). There is only one example of this type, and has been shown depicted on the body of a male figure.

(c) A disc pendant studded with gem in the centre (fig. 34, 11).

(d) Simple disc pendant without any decoration (fig. 34, 12).

Armlet

Armlets were not commonly worn in any period under review, as only a few figurines are shown wearing this ornament. Their earliest representation is noticed on the figurines, assignable to Kushāṇa period. It is noticed on male and female figurines both. It is commonly referred to as *Keyura* or *Aṅgada* in the *Nāṭyaśāstra*,[1] *Amarakoṣa*,[2] and in the works of Kālidāsa.[3] The ornament is variously known, in this region as *bājūbanda*, *ananta* and *Jośana*. The armlets represent a wide range from a simpler to the more complex varieties. The former is shown in the form of plain bands without any decoration over it. It was a popular variety in the late phase of the Period III, and continued in the succeeding Period IV. Its frequency in the later period was reduced. Specimens of the Period IV showed a much

1. *Nāṭyaśāstra*, XXIII, 33-34.
2. *Amarakoṣa*, 6, 2, 106.
3. *Kalidasa granthāvalī., op. cit., Raghu*, 6-14, 53, 16-60, *Kum.* 7-69.

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breadth band as compared to the previous period. The representation of simple bands suggests that they were made of metal plates (fig. 34, 13). Apart from these simple bands represented in the late phase of the Period III, some beautiful specimens, decorated with vertical lines, forming rectangular panels (fig. 34, 15), or specimens studded with gems or pearls or beaded design, embossed possibly on the metal surface, may also be mentioned here.

Their best representation can be seen in the Period IV. They are important from technological point of view, as they throw light on the techniques of inlay, embossing, and cut work. Another important variety noticed on the female figure during the period is the representation of the eight coils around the arm (fig. 28, 10). The armlets of the Period IV differed from those of the earlier period in the following respects :

(i) The band becomes broader, and, at times, studded with gems or pearls (fig. 34, 16 17).

(ii) Armlet is shown with open terminal (fig. 29, 22). It is worn by a figure, identified as that of a milkamaid. Such ornament usually made of silver or cheaper alloys, is still current in this region.

(iii) A small circular metallic sheet tied on the arm with the help of a string is also seen on a figure presumably of a soldier (fig. 34, 18).

(iv) At times, these are depicted with overlapping ends (fig. 34, 14), which may be identified with the *Aṅgada* variety of ancient literature.

(v) An armlet in the shape of a flower (fig. 34, 19). The same, when worn by ladies of higher classes, is ornately decorated (fig. 34, 20).

It appears that the plain variety was used by the persons of average means like milkmaid, soldier, *etc.*, while the beautiful specimens, made of costly materials, and usually depicted on the cult figurines, were used by the women of higher status.

Bangle

Bangles of numerous varieties appear to have been worn by every class of people. They are known as *avāpaka*, *parihārya*, *kaṭakā* and *valaya*.[1] The use of this ornament started in Varanasi around 800 B.C. There is hardly any terracotta figurine in which the ornament has not been depicted. The popularity of this ornament can further be judged by their occurrence in large number from the excavations of Rajghat. They were made of terracotta (sixteen), copper (fourteen), bone (one), shell (thirty six) and glass (fortyfive). The copper bangles were the

1. *Amarakoṣa*, 2.6.106.

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first to be used by the early settlers of Varanasi. In the succeeding Period II (Ciroa 600 B.C.—200 B.C.), bone and terracotta were the two new materials employed for this ornament. Shell and glass bangles apeared with the beginning of the Christian era. The latter replaced the former in the later periods.

Copper bangles

Only fourteen bangles of this material are recovered from different levels (pl. XXXI). The larger proportion of them is plain and made of copper wires of different thickness. The occurrence of decorated specimens is limited. The bangles used by the earliest people appears to be simple one and made of circular wire.

A change in their design is noticed in the succeeding Period II. Two such changes can be explained : (i) bangle twisted cable-wise, (ii) bangle with open ends (the end being represented in the form of a bud). This possibly suggests an advancement in the technique of their manufacture.

The study of bangles belonging to the Period III revealed the continuity of the types noticed in the preceding periods. Some times, they are made of simple copper wire, the ends of which are twisted and tied round (pl. XXXI, 2). This specimen is made by hammering a wire, which is indicated by the fact that the end of the wire is very thin as compared to middle portion. The diameter of the specimen is 42 *mm.*, which suggests that it was worn by baby.

The finest examples of bangles are obtained from the Period IV, Mention may be made in this regard of a specimen, which is decorated with beaded pattern (pl. XXXI, 5).

Shell Bangle

Thirty six fragmentary shell bangles, including a few bracelets, are obtained from the excavation. The distribution chart clearly indicates that the largest number of shell bangles belonged to the late phase of the Period III.

Period III (*Late phase*)

The late phase of the period III is marked by the introduction of shell bangles and bracelets in Varanasi (pl. XXIX). They occur in both plain and decorated varieties. The majority of the bangles represents the former variety, while the latter is shown with incised lines or some other designs, which run along the outer periphery of the specimen. Most of the specimens are well finished having smooth and shining surfaces on both the sides. But, quite a few bangles show that the finish was done on the outer side only. The bangles show rectangular or squarish section. Those with a groove on the outer side are noteworthy. Similar specimens are

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also reported from Vaiśālī,[1] Prakash,[2] Meheshwar,[3] Nevasa,[4] *etc.* The assumption that the groove was meant for the inlay of gold leaf is supported by the occurrence of a specimen at Nevasa.

The discovery of a few bracelets (*Kaṅgana*) during the period is noteworthy, since this type did not occur in the succeeding period. Such bracelets, when broken, were also repaired in antiquity. Two such repaired specimens have been recovered from the excavation, in which a rusted iron pin, along with fragments of an iron sheet sticking on the inner surface, can be still noticed (pl. XXIX). It is clear from the above evidence that the shell bracelet was a prized commodity. This was in keeping with the scarce availability of shell which had to be imported from the region of bay of Bengal.

Period IV

In the succeeding Period IV, bangles with shorter width were more common. The use of bangles, with numerous designs, seems to have increased. Plain specimens with well finished surface are also noticed. The technique employed in their manufacture has already been dealt[5] The conch shell bangles, known as *śaṅkhavalayas* and *śaṅkhakas*, have been frequently referred to in the contemporary literature.[6]

Chart giving the distribution of bangles of various materials at Rajghat

Period	Copper	Terracotta	Bone	Glass	Shell
I	1	–	–	–	–
II (Early phase)	1	–	1	–	–
Late phase	1 (?)	3	–	–	–
III (Early phase)	–	4	–	1	–
Late phase	5	5	–	11	19
IV	5	4	–	33	17
Total	13	16	1	45	36
					(Total – 111)

1. Deva, Krishna and Mishra, Vijayakanta, *op. cit.*, (1961), p. 61. pl. XXII A.
2. Thapar, B.K., *op. cit.*, pl. XXIV, 14.
3. Sankalia, H.D., *et. al.*, *op. cit.*, (1958), p. 229.
4. Sankalia, H.D., *et. al.*, *op. cit.*, (1960), p. 459.
5. Hanna, Rydh, *Rang Mahal*, the Swedish Archaeological Expedition to India 1952-54 (1959), Lind,figs. 121, 122.
6. Sivaramamurti, C., *op. cit.*, (1956), p. 112.

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Terracotta Bangles

The use of terracotta bangles has a long tradition in India. They are less in number than those of glass and shell. A majority of them is hand made, as indicated by their irregular shape and thickness. They vary in thickness from 6 *mm.* to 12 *mm.* It is only from the Period IV that we start getting moulded bangles. The finest examples are found during this period. The specimens, with pentagonal section or with wavy design on the outer surface, are noteworthy examples of the period. Terracotta bangles have been reported from Maheshwar, Navdatoli.[1] Vaiśālī,[2] Kauśāmbī,[3] Kumrahār,[4] Śrāvastī,[5] and other sites.

Glase bangle

It seems that glass was known quite early to the people of Varanasi, but glass bangles were first introduced in the period between 200 B. C. and the beginning of the Christian era.

The glass bangles in use between Ist Century A.D. and 3rd Century A.D., are of two varieties, *viz.*, monochrome and bichrome. Of these, the former is represented mostly in black colour, with an exception of a green glass specimen. The bichrome bangles show a basal dark-tan band, over which either a plain strip in yellow or white dots are applied. Both are translucent. The use of stratified glass in manufacture of bangles is also attested to during this period.

The polychrome bangles have been recovered from the Period IV, along with the earlier mentioned two varieties which had continued from the preceding period. The glass bangles occupied the highest position in the frequency. The occurrence of polychrome bangles at such an early date is noteworthy. Three to five colour combinations have been used in the polychrome bangles. Another important feature noticed during the period is the emergence of bangles with channel section in bichrome and polychrome varieties. It gained popularity in the post Gupta period.

Depiction of bangles and bracelets in terracotta figurines appear to be a common feature. Their representation, prior to C. 200 B. C., is not noticed. This may be due to the limited occurrence of terracotta figurines. It appears from their delineation that the bangles were worn in three to five in numbers (fig. 35, 1, 2). When accompanied with a bracelet, their number gets reduced. The following

1. Sankalia, H.D., *et al.*, *op, cit.*, (1958), p. 200.
2. Sinha, B.P. and Roy, Sita Ram, *op. cit.*, (1969), pp. 192-193, pl. LXXIII.
3. Sharma, G.R., *op. cit.*, (1969), pp. 93-4, pl. LVII.
4. Altekar, A.S., and Misra, Vijayakanta, *op. cit.*, (1959), p. 131. pl. LIX, A.
5. Sinha, K.K., *op. cit.*, (1967), p. 72.

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representative types in bracelets have been noticed in the terracotta figurines belonging to the Period III.

1. Simple metallic round piece (fig. 35, 3),

2. Bracelet studded with pearls or precious stones (fig. 35, 3). Similar variety is identified elsewhere[1] as *ratnavalaya.*

3. Bracelet decorated with chequered design (fig. 35, 3). This type is noticed at Sanchi and identified by joshi[2] as *jāla-valaya* of *Gāthā Saptaśatī.*

4. Bracelet composed of beads or pearls (fig. 35, 3, 4) or of beaded pattern. Similar type can also be seen depicted in the Gandhara[3] sculptures. In the period between Ist and 3rd Cent. A.D., the number of bangles increased from five to eight. It is interesting to note that those figurines, which are draped in foreign costume, are shown with fewer number of bangles (fig. 28, 12, 15). Sometimes, only one bracelet alone is used (fig. 35, 6). Their artistic representation can be seen on a few specimens belonging to the Period IV (fig. 35, 7). The use of the simpler variety of bracelets, along with bangles, is also attested to (fig. 35, 8).

Finger ring (aṅgulīyaka)

The excavation yielded twenty one specimens of rings, made variously of copper, shell and glass. Plain rings may have been used either as ear or finger rings. It may be noted that rings made of glass and shell are still in use as finger rings. The material most commonly employed for manufacturing rings is copper (pl. XXXI, 7-9). Sixteen rings made of this material are recovered from the excavations. They are too corroded to give any indication of decoration. Plain rings are common, and have been reported from the corresponding levels at sites like Hastināpura,[4] Śrāvastī,[5] Vaiśālī,[6] Kumrahār,[7] Nevasa,[8] *etc.* These are mostly with circular section, although a few specimens with plano-convex, flat or triangular sections have also been met with. The earliest specimen comes from the early phase of the Period II (C. 600-400 B.C.). Their frequency increases in the succeeding Period III. Certain new shapes in the finger rings also appear to have been introduced during this period. In this regard particular mention may be made of rings having bezels (pl. XXXI, 7, 9), as specimens of similar variety have been reported from the

1. Sivaramamurti, C., *op. cit.*, (1956), p. 111.
2. Joshi, N.P., *op. cit.*, p. 208, fig. 681.
3. Krishna Murthy, K., *op. cit.*, p. 44, fig. X, 49.
4. Lal, B.B., *op. cit.*, (1954-55), p. 92, pl. LIVA, 3.
5. Sinha, K.K., *op. cit.*, (1967), p. 66, fig. 20, 1.
6. Sinha, B.P., and Roy, Sita Ram, *op. cit.*, (1969), p. 199, pl. LXXXIV, 3 and 4.
7. Altekar, A.S., and Mishra, Vijayakanta, *op. cit.*, (1959), p. 130.
8. Sankalia, H.D., *et. al.*, *op. cit.*, (1960), p. 415.

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corresponding level of Nevasa,[1] Prakash[2] and Taxila.[3] The specimen from Rajghat shows similarity with those discovered at Taxila. In the succeeding Period IV, all the types of the earlier period continued with little changes. Mention, however, may be made of the variety which appeared with a bezel containing a depression possibly for inlay. This variety is also reported from Taxila.[4]

The other material used for this ornament was shell. Only two shell rings (pl. XXIX) of varying diameters (20 *mm.* and 26 *mm.*) from the Period III alone are obtained. One of these is plano-convex in section and decorated externally with vertical incised design all around. The other is a fragmentary specimen, rectangular in section, and is without any kind of decoration.

The glass has been used for the first time for the manufacture of rings in the Period IV. Only three specimens of this material are found. All of them are monochrome. The range of colours includes yellow, green and black. They are of a plain variety. The diameter of these specimens varies between 15 *mm.* and 19 *mm.* Rings of glass are reported from many sites in India, *viz.*, Nasik,[5] Nevasa,[6] Taxila,[7] *etc.* Exactly similar glass rings are still in use and available in the Banaras market. The disappearance of shell finger rings is rather surprising, as the bangles of the same material continued to be in use during this period.

Girdle

This was mainly the ornament of the ladies. The men used them rarely. This ornament has been depicted in the terracotta figurines as being worn by persons of all ranks. There are not many varieties, but those delineated in the terracotta figurines show interesting features, such as the use of beaded tassels hanging on the thigh (fig. 28, 2).

The earliest example,[8] which comes from the Period I, is studded with pearls or precious stones (fig. 35, 9). The same type continued in the succeeding Period II, along with another variety, which may be identified as a simple cloth tied around the waist. The period immediately following the NBP ware culture (circa

1. Sankalia, H.D., *et al.*, *op. cit.*, (1960), p. 415, fig. 184, 10.
2. Thaper, B.K., *op. cit.*, p. 122, fig. 39, 12.
3. Marshall, *Taxila*, Vol. II and III. pl. 197-98, p. 646, Specimens with plain bezel without any decoration are found from Bhir and Sirkap mounds at Taxila ranging from 4th century B.C. to 1st Century A.D. Our specimen is noted in the corresponding level and remote similarity is also indicated.
4. *Ibid.*, Vol. II, p. 467, Rings of this variety are earlier in date, except one no. 40, p. 198.
5. Sankalia, H.D., and Deo, S.B., *The Excavations at Nasik and Jorwe*, Poona, (1955), p. 99.
6. Sankalia, H.D., *et al.*, *op. cit.*, (1960), p. 451.
7. Marshall, *Taxila*, Vol. II, p. 650.
8. It has an unusually early date. Since there is a solitary specimen, its provinence in such an early context cannot be very definite.

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200 B.C. to 300 A.D.) represented those specimens, which were heavy and consisting of several strings. It is during this period that the interests of the artists had become diversified, and the attention was given to the production of metal girdles. However, majority of the girdles continued to be made up of beads or pearls. The popularity of these might be due to the fact that Varanasi was also a manufacturing centre of beads during those days. The girdles made of beads or pearls were more in fashion than the metal specimens elsewhere also, during this period, as is evident from the depictions in the sculptures of Bodhgaya, Sanchi and Bharhut. In majority of the cases, it has been observed that the girdles worn by the deities and the ladies of the higher class were elaborately and beautifully designed, while those used by the common class were comparatively less elaborate and had often a single string of beads or pearls. Two broad varieties in them can be seen. They include (i) Girdle composed of beads or pearls with a circular clasp provided in the centre, and (ii) beaded girdle without clasp. The former was confined only to the early phase of Period III, and did not continue in the succeeding ages, while the latter was common in all the periods under review. There are many references to girdles in ancient Indian texts.[1]

The following representative types of each period, as depicted in the terracotta figurines are given here :

Period I

1. The girdle is shown by a single row of punched circlets between two horizontal grooved lines (fig. 35, 9). It is worn by a female figure which is identified elsewhere[2] as Mother-goddess. The circlets possibly suggest that the girdle was studded with pearls or precious stones.

Period II

2. A female figure has been shown wearing a girdle of the simple bands. There is no indication of beads or pearls, therefore, it may be identified as *Paṭṭikā* like object (fig. 32, 24) mentioned in the Buddhist texts. They are also to be seen in the sculptures of Bharhut, Mathura and Amaravati.[3]

1. *Nāṭyaśāstra*, XXIII, 36-37, refers to *Kāñchī, Mekhalā, Raśanā*; *Amarakoṣa*, 2, 6.108, mentions *Mekhalā, Kāñchī, Saptakī, Raśanā, Sārasanam* and *Kālidāsa granthāvalī*, makes mention of *Purusantra Mekhalā* in *Raghu*. XI-17, *Tapanīya Mekhlā* in Kum VIII-81. *Hema Mekhlā* (gold girdle) in *Ritu*. 1-6; *Maṇi Mekhalā* in *Raghu*, 19-45, *Kum*. 1-38 and *Ritu*, 6-4, *etc*.
2. Agrawala, V.S., *op. cit.*, (1947-48), pl. XXXI A, 7, p. 108. Similar figure of Mother-goddess is dated between 300 and 200 B.C. at Ahichchhatrā. Figurines of this type having identical girdle are reported in the similar context at Vaiśālī also (Sinha, B.P., Roy, Sita Ram, *op. cit.*, (1969), pp. 153-54, pl. XL, 3-8.
3. Sivaramamurti, C. *op. cit.*, (1956), p. 113.

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Period III

3. A girdle consisting of four strands of spherical beads or pearls and probably provided with a central round clasp. Hanging down from the girdle are shown pearl or bead tassels of six strands. The above depiction occurs in a standing figure of Lakṣmī (fig. 28, 2). There is no other example of this variety.

4. A girdle composed of three strings of spherical beads or pearls of equal size. The hanging tassels of the preceding type 3 are absent (fig. 35, 10). Similar girdles are reported from Bodhgaya[1] also.

5. The three stringed girdle, noticed on the waist of a figure (fig. 28, 3), is composed of barrelled-circular beads, alternating with disc shaped spacers. The use of spacer-bead is a new feature, which did not occur in any other specimen. It is interesting to note that spacer beads of similar type are reported from the excavation too.

6. Another type is seen, which has probably one strip of circular plaques containing floral designs. This can be presumed from the two plaques, which are shown in the front part. The flower motif, common in the typical Śuṅga figurines, is also represented in the girdle (fig. 28, 5).

7. Single stringed girdle composed of circular discs (fig. 34, 8). Sometimes, these discs are shown decorated with circlets, perhaps meant to show the inlaid gems (fig. 34, 9).

In the late phase of the Period III, which coincides with the Kushāṇa period, a few changes in the design pattern have been noticed.

8. Double stringed girdle, made up of beads or pearls, is seen in a standing female figure (fig. 35, 11).

9. The girdle is adorned with three rows comprising a pattern, such as rope at the top, a row of diamond in the middle and rectangular panels at the bottom. The girdle was presumably made of a broad rectangular sheet of metal, which was embossed with the above designs (fig. 35, 12).

10. Girdle having decoration of vertical strokes (fig. 35, 13).

Period IV

Single or double stringed girdles, made up of globular beads or pearls, were the commonest varieties during this period. The former was generally used by men (fig. 29, 28) and children, while the latter was worn by women only (fig. 35,

1. Bachhoffer, Ludwing, *Early Indian Sculpture*, pl. 32.

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14). Single stringed girdles may be identified as the *Pariveśa Kaṭisūtra.* menticned by Bāṇa.[1]

Anklet

The anklets were mostly worn by the women, though their use by men is also met with. The earliest evidence of their use in Varanasi goes back to the 2nd century B.C. Except for one example, all the specimens consist of a single ring as suggested by their depiction in the terracotta figurines of Rajghat. A majority of the specimens appears to be heavier in weight. It is interesting to note here that some of the types belonging to the late phase of the Period III are distinct in shape and design from those of the preceding and the succeeding periods. Beautiful patterns were executed on them. One such specimen shows a beaded pattern, produced on the metal sheet by embossing. The finest and richest specimens were produced during the Period IV, revealing the knowledge of a more developed skill. Anklets during the period take still newer forms. Like the ornaments of the other parts of the body, anklets, too are featured in the early Indian texts.[2]

Two types of anklets appear to have been used, (i) anklets with jingling effect, and (ii) the plain ones. The former variety was introduced in the late phase of the Period III, while the latter had an earlier beginning. The general term used for this type of ornament in this region is *Karā.* The following representative types of each period, as depicted in the terracotta figurines are given here :

Period III

1. Plain ring mostly circular in section of varying diameters. The anklet is depicted in the form of a plain heavy ring. In the early phase of the Period III, figure of goddess Lakṣmi (fig. 28, 2), ladies of higher class and other women (fig. 28, 5) have been shown wearing this kind of ornament. It becomes rare and light during the late phase of the Period III and the Period IV. A lady draped in foreign costume is shown wearing this type (fig. 29, 1). The type possibly corresponds to the *pāda-kaṭaka* variety[3] and was in use during the Mauryan time.[4] The type is also reported from Mathura,[5] Gandhara[6] and Amaravati.[7]

1. Agrawala, V.S., *Harṣacharita*, p. 175.
2. Nātyaśāstra, refers to the types as *Nūpura, Kinkiṇī* (the string of bells, *ghaṇṭikājāla*) and *Kaṭakā*, p. 418, while *Amarakoṣa*, mentions *Pādāṅgadam, Tulākoti, Mañjīrā, Hansaka, Pāda-kaṭakā, etc.*, 2.6.109. and *Kālidāsa granthāvalī, op. cit., Maṇi Nūpura, Ritu.* III.27., *etc.*
3. *Amarakoṣa*, 2.6. 109.
4. Joshi, N.P., *op. cit.*, p. 220.
5. Bachhoffer, Ludwig., *op. cit.*, pl. 92.
6. Krishna Murthy, K., *op. cit.*, fig. XI, 57.
7. Sivaramamurti, C., *op. cit.*, (1956) pl. VIII, 17, 18, 35. In these specimens two rings are shown, whereas, our specimens exhibits only one such ring.

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2. An anklet with its terminals probably joined together into a floral boss (fig. 28, 3). The type is confined in the early phase of the Period III alone. It is current in this region even today.

3. An anklet embossed with beaded pattern (fig. 30, 11). This type is used even today by the village ladies of this region. The specimen appears to be hollow and the said design was executed on the metal sheet. It is interesting to note that the type had probably an unbroken tradition till this day. This type came into existence in the Kushāṇa period, since its earlier depiction has not been noticed. However, specimens with similar pattern are seen in the Gandhara sculptures.[1]

4. An anklet probably composed of strings of rattles or bells. It is shown on a figure belonging to the late phase of the Period III (fig. 35, 16). In another instance it is made of three strings and is elegantly shown on a female figure (fig. 28, 8). This may be identified as *Kinkiṇī* (the string of bells, *ghaṇṭikājāla*). referred to in literature.[2] Similar type of anklet is also noticed in the paintings of Ajanta.[3] The evidence of two actual specimens of copper *Nūpura*, from the Period IV, have also been found in the excavation, suggesting their continuity in the succeeding period. Identical copper *Nūpuras* are also reported from Vaiśālī[4] in the corresponding level. This might have been worn by the dancers.

Period IV

5. The broad anklet studded with gems in a row. The ornament is shown on the foot. This possibly corresponds to the *maṇi-nūpura* mentioned by Kālidāsa[5] (fig. 35, 17).

6. Anklet decorated with oblique lines, suggesting that the specimen was made from twisted rods (fig. 35, 18). At times, it is shown with some ornamentation (fig. 35, 19). Since the present and the preceding type 5 were not noticed earlier, they may be taken as an innovation of the craftsmen of the Period IV.

Besides this, anklets in the form of plain rings, similar to the type 1 of the preceding Period III, are also noticed. It is worn by a male person (fig. 35, 15). We may infer from the above that the type was not restricted to any particular class of women or men in the society of any period.

1. Krishna Murthi, K., *op. cit.*, fig. XI, 58.
2. *Nāṭyaśāstra*, p. 418.
3. Dhavalikar, M.K., *op. cit.*, (1973), p. 77, fig. XXII, 14.
4. Sinha, B.P., Roy, Sita Ram, *op. cit.*, (1969), p. 206, pl. LXXXIV-2.
5. *Kālidāsa granthāvalī*, *op. cit.*, *Ritu*, III-27.

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Bead

This is one of the most commonly occurring group of objects from most of the excavated sites of early historical period. The site of Rajghat has yielded two thousand four hundred and seventy two beads from the different levels. These were made of twenty one different materials. However, no gold and silver beads were recovered from excavation. From their occurrence in large numbers it appears that it has been one of the most favourite objects of personal decoration of both the sexes from the earliest period down to the present day in Varanasi. Beads by themselves were not used as ornament but a combination of several of them formed ornament like forehead ornament, necklace, girdles *etc.*

Terracotta was the most favourite material in every period due to its easy availability. The ancient people of Varanasi made wide use of it. Next in order of frequency come glass, agate, carnelian, chert and faience.

The earliest setters of Varanasi used beads made of terracotta, bone, chert and paste only. However, a good variety in the material and shape has been noticed in the succeeding Period II. The introduction of new shapes using a variety of new materials during this period may have been due to the result of the contacts, made by the traders, with different cultural centres. In the preceding Period I, the use was restricted to only four materials, whereas, during this period thirteen new materials were added. In carnelian, both the etched and plain varieties were made. The occurrence of copper beads is important, as they are absent in other periods. The use of spacer-bead was also known as suggested by an agate specimen.

When we come to the Period III, we notice the occurrence of a variety of beads. In addition to the materials already in use; certain new ones like quartz and granite were introduced. Besides, the abundance of glass beads during this period is noteworthy. The higher frequency of carnelian beads between 1st and 3rd century A.D. shows that the beads made of this material became more popular during this period. In agate beads, important shapes are globular 'eye' bead, leech shaped lenticulars, toggle shaped and lug collared tabular. They are of special interest, as etched specimens also occurred in them during this period.

The finest specimens of the Period IV are made of terracotta and glass. It is interesting to note that materials like agate, chalcedony, chert, jasper, lapis-lazuli, paste, shell *etc.*, yielded mostly those shapes, which were noticed in the preceding Period III. But, etched beads in agate are absent. An important type in bone and chert from this level is a disc bead. After terracotta, glass represented the second largest group, which attained prominence during this period. These are found in numerous colours. The colours represented include black, black and white, black and red, 'eye' bead of black glass, blue, green, *etc.*

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In the preceding pages, we have discussed the development of individual type of ornaments and jewellery, meant for decorating different parts of the body. We now propose to present here a summary of the above. But in doing so, we shall try to see the total picture of each period. We would like to repeat that although the actual finds of ornaments and jewellery are not very adequate, yet the richly decorated figurines from the different periods provide us with substantial information about the jewellery that must have been in vogue.

In period I (*i.e.*, between C. 800 B.C. and 600 B.C.), the items of jewellery or ornaments consisted of only copper bangles and a number of beads of chert, bone, paste and terracotta. Besides these, the other representative types are the drop pendants of quartz crystal and shell. Incidently, this is very early example of quartz crystal, since at other sites, notably Śrāvastī and Taxila, quartz crystal of transparent variety was not in vogue before 2nd Century B.C. Very few terracotta human figurines belonging to this period have been recovered. As will be seen below these figurines provide very useful information regarding jewellery and ornament.

From the succeeding Period II, not only the actual specimens like the copper rings, *etc.*, were recovered, but also, several terracotta human figurines, depicting various items of jewellery, are obtained. Among the ornaments shown on the figurines, mention may be made of necklaces, occasionally accompanied by a torque, girdles, *etc.* The figurines also reveal the sophisticated technique of setting jewel or stone on metal surface. Some of the Mother Goddess types of figurines are seen wearing a kind of girdle, decorated with a row of punched circlets, suggesting possibly the knowledge of setting gems on metal surface. Besides the above, a large number of beads made of various kinds of precious stones and also of copper indicates that people were fond of decorating their person with ornaments and jewellery which were being made locally but in some cases were being brought from other centres.

In the Period III, some more items and the variety in the existing items were added. The actual ornaments recovered from this period mainly consisted of beads, pendants, bangles and finger rings. The period also saw the developed technique of making beads of glass. As for the varieties, mention may be made of pendants, formed in the shape of birds and fishes. In regard to bangles, shell and glass were used for the first time. It may, however, be mentioned that on sites like Śrāvastī, Hastināpura and Taxila, glass bangles have been recovered from a much earlier context. Absence of glass bangles at Rajghat from the earlier period may thus be accidental. An interesting feature of the glass bangles from Rajghat during the period under study was the occurrence of both monochrome and bichrome varieties. Moreover, the occurrence of shell bangles during this period is in conformity with the evidence from other sites. We may make here a special

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mention of the occurrence of terracotta bangles, which denoted that these might have been used as ornaments by that section of the society, which could not afford more expensive materials.

The other noteworthy object, which appears for the first time during the period, is the finger ring having bezels. Similar specimens have been recovered from Taxila.

Besides the above specimens, the terracotta human figurines from this period show a far more richness in the variety and design of the ornaments and jewellery in use during the period. These consist of items of jewellery from forehead down to the anklets. Some of these, notably forehead ornaments and the armlets appear for the first time. The remaining items such as the ear ornaments, necklaces, torque and girdles, though occurring on the figurines of the preceding periods, show a great elaboration of design. In the case of necklaces, many of these conform to the descriptions, given in the contemporary texts. The simpler variety of torque of the preceding period was replaced by the ones bearing embossed rosette design. Girdles of the tasselled variety of the early phase did not continue in the late phase. Increasing popularity of the multi-stringed variety is to be noted. In brief, the Period III is important not so much for the introduction of new varieties but more for the elaboration of the existing varieties. One of the most noteworthy features was the occurrence of moulded ornaments in good numbers. In this connection, mention may also be made of engraving and cut work, which were employed during this period. The results of the use of the above techniques can be seen in the ornaments and jewellery depicted on the figurines. Some of these could be ascribed to the cultural contacts with the western region in the wake of the Indo-Greek and Indo-Scythian influences during the period under review.

Period IV, which coincides with the Gupta period, shows further development. In the forehead ornaments, a few more varieties were added, while in the case of ear-ring, some of the specimens show elaborate decoration. A number of necklaces corresponding in some cases with the literary description came into vogue. Ornaments studded with gems, were also in use. The specimen probably an armlet made of copper (pl. XXXI, 1) is an interesting example. Anklets during the period take newer forms. Some of the specimens show close affinity with those depicted in the paintings of Ajanta.

It is apparent from our study that decoration of the body by means of ornaments has a continuous history at Rajghat, too, as is the case at the other contemporary sites of India. Besides, there is evidence to trace the development of shapes and forms of the individual items through the ages, as well as, their changing models in the respective periods, at this place.

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6

The Coiffure

Like dresses, the only source for the study of hair styles prevalent during different periods in Varanasi, is the terracotta figurines from this site. Since, the study is confined to a single source, our knowledge in this regard is obviously insufficient for most of the periods. The limitation of data is particularly seen in the first two periods, *i.e.*, from the earliest period down to circa 2nd Century B.C. Incidently, we do not have any information about the coiffure worn by the earliest people, as no such terracotta figurine of this period has so far been found, which depicts any kind of hair style. Similarly, in the succeeding NBP ware culture (C. 600 B.C.–200 B.C.), we have very scanty data in this regard, as only two specimens, one each from its early (C. 600-400 B.C.) and late phases (C. 400-200 B.C.), have been obtained from the regular digging. The occurrence of terracotta figurines, in this long span of period, is generally very low not only at Rajghat but also at other sites of the Gangetic valley. Even these limited specimens are very often broken and hardly help us in gathering relevant information. In the later periods also, at times only torso or leg portions of the figurines are recovered, which are hardly useful in reconstructing the history of coiffures. However, a good number of male and female heads belonging to the Gupta period, both from the excavations and in the Bharat Kala Bhavan collection of Rajghat, has revealed an overwhelming variety of coiffures. With all these obvious limitations, we proceed hereunder to describe and discuss the coiffures worn by both the sexes during different periods, as revealed by the terracotta figurines recovered from Rajghat.

Both the specimens belonging to the NBP ware phase are clumsy in execution and the hair is indicated only by incisions. From their delineation, it appears that the hair was simply combed back in both the cases. However, there is another female figure from Rajghat in the Bharat Kala Bhavan collection, which may be assigned to the Mauryan period on stylistic grounds. It exhibits another variety in which the whole mass of hair has been gathered together to form a top-knot.

Period III : Early Phase (C. 200 B.C. to the beginning of Christian Era)

The period immediately following the NBP ware culture also does not reveal much variety in coiffures, though it may be credited with some very artistic and

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elaborate hair arrangements. This is evident from a few terracotta specimens of the period under discussion. It may, however, be noted that a number of specimens of this period wears some sort of head-dress or some indistinct object, due to which the coiffures worn by the figures are hardly discernible. The following representative styles of the period have been observed.

1. In this style the hair appears to have been combed without any indication of a parting line. It is then twisted and given the form of a loop from which the remaining portion of the hair has passed. Further a part of the hair falls on the left side (fig. 36, 1).

2. In another mode, the entire hair has been first gathered and twisted on the head and then its rings have been arranged in a roughly pyramidal form, which bends slightly towards the left side. It is also tied with a ribbon or string to give firmness to the hair arrangement. The style is simple but gives sober look to the lady (fig. 32, 3).

3. The hair of the lady in this style has been arranged in a top-knot and tied at the lower end with the help of a ribbon. In view of the usually big size of the knot, it may be presumed that false hair was also used in this hair-do, a practice seen even today. To render beauty to the face a part of the hair has also been left to fall on the forehead and on the left side. The fashion of top-knot seems to have continued from the preceding Mauryan age, though during this period, it is more beautifully represented with the aid of two additional accessories, *viz.*, the false hair and the ribbon (fig. 28, 4).

4. This hair style was prevalent probably among the ladies of more well-to-do families. In this case, the coiffure is composed of two knots, one bigger on the left and the other smaller, on the right side and it is lavishly adorned with a number of strings of beads or pearls (fig. 36, 2). The use of strings made of beads or pearls to embellish the coiffure appears to have been introduced for the first time during this period.

Thus, it is clear from the above description that the period may be credited with a number of innovations in hair-styles and the introduction of three important accessories in them, *viz.*, (i) the ribbon, (ii) the false hair in the make up of knots (*Jūṛā*) and (iii) the strings made of beads or pearls.

Late Phase : (Ist to 3rd Cent. A.D.)

A distinct change in the hair styles can be observed in the late phase of the period, which roughly coincides with the Kushāṇa rule over the region. Two factors mainly seem to have been responsible for these changes, *viz.*, (i) natural development in the fashion itself, (ii) and the diffusion of foreign elements in the life pattern of the population. The under-mentioned varieties of coiffures, as

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noticed on the various terracotta figurines of the period, may confirm the above view.

1. This style is represented by a figure of a lady, in which the head is broken and hence it is not possible to gather full details. However, from the back view it seems that she bore a long intersecting *veṇī*, reaching approximately the waist (fig. 36, 3). It is presently known as '*Choṭī*' and the style is a living fashion among women of almost every class. This is the solitary example of *veṇī* from Varanasi and the other figurines of the phase display only the top knot in different modes. *Veṇī* appears to have become more popular in due course, as is evident from the frequent reference to it by Kālidāsa.[1] On the basis of the available evidence it may be held that it came into fashion in this region only during the Kuṣhāṇa period, although its earlier representations can be seen at such centres like Bharhut[2] and Sanchi.[3]

2. In this variety the hair has been coiled into a top-knot at the apex of the head (fig. 36, 4).

3. This too is a top-knot arrangement, but in a different manner. In the present style the entire hair after being combed, has been gathered and knotted on the right side of the head. It is further tied by a ribbon or some other similar material to give firmness to the shape (fig. 36, 5).

4. Sometimes the rich women arranged their hair in a puff like knot at the apex of their head and tied it with two thick strings of beads or pearls (fig. 31, 3). The knot appears like a high dome and may be taken as a natural development of the type (fig. 28, 4) which was noticed in the preceding phase.

5. This style is represented by a typical coiffure worn by a lady, in which she has arranged her hair in a fan-like fashion. A hair pin like object has also been used to give support to the hair-do (fig. 31, 14). This does not appear to be a common fashion and seems to be confined to this period only.

Among the other prevalent hair-styles of the period the one, which is simple yet attractive in look, needs special mention. The hair of the lady has been neatly brushed sideways probably with a central parting. It is then collected together at the back and twisted into a looped knot on the nape. This type of coiffure is still in practise by the ladies of every class. This type of hair-do is not noticed in the preceding periods, and thus, the people of this age may probably be credited with the introduction of this particular style.

Apart from the above discussed coiffures, some figures with foreign ethnic

1. *Kālidāsa granthāvalī*, *op. cit.*, *Abhi*, 7, 21, *Uttar Megha*, 30 and 34, *etc.*
2. Motichandra, *op. cit.*, (1973), pp. 220, 212-13, figs. 7, 31, 33-36, 41.
3. Marshall, *Monuments of Sanchi*, Vol. II, Pl. XXXII Stupa I, northern gate.

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features have also been found. The style of coiffure worn by these figures in most of the cases is not clearly delineated. However, at times their tresses are adorned by strings of beads or pearls (fig. 36, 6) or by forehead ornament in the parting line (fig. 31, 1). Similar figures with foreign ethnic features have also been found at Ahichchhatrā,[1] Vaiśālī,[2] *etc.*

Period IV (Form circa 300 A. D. to 700 A. D.)

1. When we come to the Period IV corresponding roughly to the Gupta age, we get abundant material for the study of coiffures. The terracotta figurines of the period reveal a very large variety in coiffures. Women of this age have surpassed in representing the hair-do of all the preceding ages by their attractive and varied arrangements. They very frequently used varieties of forehead ornaments in the parting of hair, while a good number among them decorated their tresses by strings of beads or pearls or by the pearl nets. It is interesting to note that a great stress seems to have been laid on keeping curled hair during this age. The representative female coiffures of the period are discussed here under :

A few terracotta figurines[3] represent a very distinguished hair style in which the right side show matted locks and the left half spiral curls.

Agrawala,[4] on the basis of this hair arrangement, identified these figures as "heads of Pārvatī-Parameshwara type combining the male and female form of the deity." Specimens representing this group has been found at Ahichchhatrā also.[5] A variation has also been found, in which Pārvatī has been depicted with curled hair on the left. In two specimens, the curled locks have also been tied with a ribbon. The following variation in all have been noted :

(i) The spiral locks (*alkāvalī*) on the left in four tieres in a receding order (fig. 36, 7).

(ii) The hair on the left in the form of ringlets in six rows of unequal length (fig. 36, 8).

(iii) Same as above but the hair arranged in three rows of equal length. The use of ribbon in this case is not visible. A circular object is placed in the

1. Agrawala, V.S., 'The Terracottas of Ahichchhatrā', *A.I.* no. 4, New Delhi, (1947-48), pp. 155ff.
2. Sinha, B.P., and Roy, Sita Ram, *op. cit.*, (1969), pp. 154-155, pl. XLI, 2 and 7.
3. Only one terracotta head representing this hair style has been found from the regular excavation, the rest were brought to light by the Railway digging and now form a part of the Bharat Kala Bhawan Collection. All these illustrated specimens have been chosen from the latter collection.
4. Agrawala, V.S., 'Rajghat Terracottas,' *JUPHS*, Vol. XIV, Pt. 1, (July 1941), pp. 1-8 Also Agrawala, V.S., *Gupta Art*, Vol. II, (Varanasi 1977), pp. 50, 111.
5. Agrawala, V.S., *op. cit.*, (1947-48), p. 132, 117.

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centre of the matted locks, the identification of which seems to be difficult (fig. 36, 9). This may probably be a sort of circular hair ornament attached with the help of a hook, as there is no indication of any kind of a suspension-string or a chain. It may also be noted that a portion of the matted locks on the right side falls upto the cheeks. This coiffure of the Pārvatī-Parameshwara style, common at this place, is rare at Ahichchhatrā.

2. In another style (fig. 36, 10) the hair have been combed side-ways with a parting line in the centre and the remaining hair, forming ringlets, have been gathered together and tied into a big ball like *jūṛā* on the left side.

A flower is also shown inserted in it, which answers to the description given by Kālidāsa.[1] From this specimen it appears that ladies of this age used to form their '*jūṛā*' directly, without making any '*choṭi*'. The form apparently presupposes the use of false hair.

3. Some specimens show a typical arrangement of hair style so far unknown in Varanasi.

In this style (fig. 31, 16) a part of the hair forms a top-knot, while the remaining hair have been divided into two by a parting line, each side having three rows of spiral curls reaching only upto the forehead region. The top of this hair-do appears to have been covered by a piece of cloth, which is further tied by a ribbon. The coiffure is further embellished by a forehead ornament. In a variation of the same style, the hair have been curled to form small balls, arranged in two tiers reaching the ear. The upper tier contains four rows of curled hair and the lower only three (fig. 31, 15).

4. Another peculiar hair style representing a combination of two different modes of hair-do, is revealed by two female heads (fig 36, 11, 12). This appears to be an amalgamation of trefoil and honey-comb styles. In this coiffure the hair have been combed first to form a central parting and then two side masses have been arranged in two impressive honey-combs. The whole arrangement is finally superimposed by an imposing ringed top-knot of pyramidal shape. The two honey combs along with the top-knot make the hair-do trefoil. Another figure represents a variation of the same style in which the hair in the centre have not been combed and shown without any parting (fig. 36, 12). It seems to be a complicated hair arrangement. Obviously, such a fashion must have been prevalent only among the ladies of higher classes. Since, it has not been observed at other centres, local origin of the style may probably be postulated.

5. There is yet another peculiar and rare style of arranging the hair in which

1. *Kālidāsa granthāvalī, op. cit., Raghu,* 7-6.

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the whole mass has been first gathered on the head and finally projected on the left side (fig. 36, 13). The projected portion has been further tied by a ribbon or string, possibly to keep it in the position.

6. In another mode of lady's coiffure, the hair have been gathered in three masses, one each on the right and the left sides and the remaining one at the top of the head. The side masses appear to have been tied by ribbons. A flower or an ornament with floral design has been inserted in the centre, and locks of hair fell over the ears on both the sides (figs. 31, 10). Agrawala[1] described this fashion as *Śṛiṅgāṭakakāra trimauli* style.

Four terracotta female (?) heads are of special interest for revealing different modes of hair knots in *jūṛā* style. In all these specimens the hair have been combed carefully. The entire hair have been gathered together and knotted either at the top of the head in a simple style[2] (figs. 36, 14) or in a fan-like fashion (fig. 36, 15). In another representation, the *jūṛā* is shown at the back of the head (fig. 36, 16). Sometimes an attractive loose loop is made of the gathered hair and placed just at the back of the head (fig. 36, 17). None of the specimens is adorned by any kind of ornament. In view of the absence of jewellery associated with the figures and the simple nature of hair arrangements, Can it be inferred that the above coiffures were worn generally by the common women ?

7. Another class of heads reveals a style of coiffure in which the entire mass of hair is dressed into a single knot placed either on the left (fig. 36, 18) or at the top of the head (fig. 31, 12). The knot in the former style is secured in a net of pearls (?) and tied by a string or a ribbon. It is further adorned by a circular ornament attached centrally near the forehead. A few curls falling on both the sides in the latter case have been shown in a most naturalistic manner. The knot has also been decorated by a flower and two strings made of beads or pearls, one shown on the forehead and other running just above it. This may be called *dhammila*, mentioned in *Amarkoṣa*[3] as well as in *Harṣacharita*.[4] Other places where this coiffure has been found are Amaravati[5] and Ajanta.[6] Agrawala has postulated South Indian origin of this style.[7] It is difficult to suggest how did the fashion reach a distant place like Varanasi. However, its occurrence at places like

1. Agrawala, V.S., 'Rājghāṭ Ke Khilaunan Kā Ek Adhyayana,' *op. cit.*, pp. 215-226, see also Agrawala, V.S., *op. cit.*, (1977), Text fig. 37, p. 56.
2. Sinha, B.P., and Roy, Sita Ram, *op. cit.*, (1969), p. 161, pl. XLIX, 10. The female figure representing similar coiffure in the contemporary level is also reported from Vaiśālī.
3. *Amarakoṣa*, 2, 6, 96.
4. Agrawala, V.S., *Harṣacharita*, p. 98.
5. Sivaramamurti, *c. op. cit.*, (1956), p. 107, pl. VII, fig. 23.
6. Agrawala, V.S., *Harṣacharita*, p. 98, also Dhavalikar, M.K., *op. cit.*, (1973), fig. XIV, 2-4.
7. *Ibid.*, pp. 97-98.

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Amaravati, Ajanta and Varanasi, *etc.*, may probably indicate its wide prevalence. This fashion might have been adopted primarily by ladies of rich classes, as suggested by the lavish use of ornaments in the hair.

8. Mention may also be made of a very popular hair style of the age, known as trefoil. It was prevalent in a vast region. The style is noticed here, with some variations in the representation of masses and also a variety of forehead ornaments. The hair masses are generally either conical or circular in form. The forehead ornament is depicted either in the *Sīmanta* (fig. 36, 19) or shown suspended through the central mass (fig. 31, 2, 3). There are very few specimens of this class in which the crest jewel is not noticed (fig. 36, 22). It is observed that the type of forehead ornament depended, to a large extent, upon the nature of the side masses. When the two side masses are considerably separated from each other the ornament is comparatively bigger and may probably be termed as '*Lalāṭikā*'. But, on the other hand, when these masses appear close to each other, the ornament is usually smaller in size. Since this coiffure is associated with an ornament in majority of the cases, it may probably be held that it was usually worn by the ladies of rich classes. Figurines representing this characteristics hair style have also been reported from Kumrahar,[1] Vaiśālī,[2] Prakash,[3] Ahichchhatrā,[4] *etc.* The ornament placed in the *Sīmanta* is in many cases, either circular or disc like, and may be identified with *chaṭulāṭilakamaṇi* or *Śikhaṇḍakhaṇḍikā* jewel. There are also examples of trefoil hair style in which the two side masses have been made as honey-comb (fig. 36, 21). This coiffure has been mentioned in the contemporary literature[5] as *Kṣaudrapaṭala* or *Madhupaṭala*. This style of arranging the hair was also noticed at Ahichchhatrā and Mathura and "had an international vogue in the ancient world, being patronized by society women in Rome.[6] In this hair arrangements of trefoil type, mention may also be made of a style termed as *bhramaraka*, in which (fig. 36, 20) the plaited hair is combed sideways resembling a bee perched which open wings. Both trefoil and *bhramaraka* are also noticed at Ahichchhatrā.[7] Apart from the above mentioned popular modes of hair arrangement, some uncommon, yet extremely attractive and distinct, coiffures were also in existence, which are being briefly described below :

9. This style appears to have been restricted to a certain class of women, as only a few specimens of this variety have been found from Rajghat. In this, a part

1. Altekar, A.S., and Mishra, Vijayakanta, *op. cit.*, (1959), p. 116, pl. XLVII, 7-9, XLVI, 8.
2. Sinha, B.P., Roy, Sita Ram, *op. cit.*, (1969), p. 161, Pl. XLIX, 2.
3. Thapar, B.K., 'Prakash 1955 : A Chalcolithic site', *A.I.*, 20 and 21, p. 119, pl. XXV, 1.
4. Agrawala, V.S., *op. cit.*, (1947-48), pp. 143-144.
5. *Kālidāsa granthāvalī, op. cit., Raghu*, 4-63.
6. Agrawala, V.S., *op. cit.*, (1947-48), pp. 138-39, 143, pl. L, 155-56, Agrawala, V.S., *op. cit.*, (1941), pp. 1-8.
7. Agrawala, V.S., *op. cit.*, (1947-48), pp. 144-45.

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of the hair has been arranged in a top-knot, while the rest fall on two sides a little above the shoulder. Each side has three strands of hair, curled into small balls which from top downwards, gradually diminish in size. The coiffure is adorned by a forehead ornament which is shown suspended through the top-knot (fig. 37, 1).

10. In another hair style, besides a small beautifully made top-knot, the curled locks fall on two sides of the central parting line (fig. 37, 2). A terracotta head resembling the above hair arrangement but without a top-knot has also been reported from Ahichchhatrā where it has been compared with the peacock feather style[1] *Barha-bhāra Keśa*.

11. Only two female figurines represent another variety of coiffure. They have been shown with veils on their head but the hair are still visible infront. While most of the coiffure is hidden in the veil, some spiral locks may be noticed on the forehead. It is further decorated by a forehead ornament placed in the centre. Female heads with a veil are also reported from Ahichchhatrā[2] and have been identified as *Abhisārikā* (fig. 29, 22, 23, fig. 33, 15).

12. A terracotta head represents a most simple hair arrangement, in which the curled hair have been combed without any indication of hair parting, leaving two spiral curls on the left side near the ear in a most naturalistic manner (fig. 37, 3). In another simple representation the hair is without any curl and has been combed gently sideways with a central parting. There is an imposing top-knot in the centre which enhances the aesthetic quality of the coiffure (fig. 37, 4).

Among other varied representation, a few more may be mentioned here. In all these cases an emphasis has been laid on the knots. They are embellished invariably by some hair ornament and as such it is possible to infer that these styles were adopted by rich-class women of the society. Some of these hair arrangements have been described below :

13. Two female heads show coiffures which are characterised by top-knots. While one of them has only one knot, the other exhibits lying one above the other. In the latter arrangement, the hair, after being combed and parted in the centre, have been gathered and then knotted at the top in two receding masses. The central parting is decorated by a string of beads or pearls shown suspended from the knot (fig. 37, 5). In a variation (fig. 37, 6) of the same a part of the hair forms a single knot, leaving a few spiral curls on the sides. The knot is held in position with the

1. Agrawala, V.S., *op. cit.*, (1947-48), fig. 1, 10, p. 163, also Agrawala, V.S., *op. cit.*, (1941), pp. 1-8.
2. Agrawala, V.S., *op. cit.*, (1947-48).

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help of a ribbon which is shown tied on the top of the knot, which is further embellished by a string of beads or pearls also shown coming from the knot.

14. This style, represented by only one specimen, is more elaborate than the preceding one, and is lavishly adorned by jewellery. The hair have been parted in the middle and tied into a *jūṛā* at the back of the head, which is also decorated by a string of pearls or beads. In this specimen two knots of unequal size have been made by coiling or twisting the gathered mass. The figure also wears a *Lalāṭikā* in the *Sīmanta* and an indeterminate circular hair ornament has been inserted in the tresses on the left side (fig. 37, 7).

15. An entirely different and peculiar hair arrangement has been noticed in one case, in which the hair have been first parted in the centre and then the entire mass has been collected together at the top of the head where it is tied by a band. Further, the collected mass which has been left hanging sideward, is adorned by a string of beads or pearls (fig. 37, 8).

Sometimes a net decorated by beads or pearls, covers the *jūṛā* placed on the top of the head (fig. 37, 9). However, in another instance it is probably covered by a piece of cloth and is also adorned by an ornament. Some curls have been left on both the sides (fig. 37, 10).

16. In this coiffure the hair have been combed and parted in the centre and been then a loose loop has been formed by twisting the gathered hair at the back near the right ear. The central parting of the hair is decorated by an ornament made of pearls or beads. A similar string extending right upto the ear, is also shown fringing the hair on the forehead. Apart from these decorations, an indeterminate hair ornament also appears to have been inserted in the tresses at the back (fig. 31, 11).

17. This is an interesting style in which the hair has been neatly brushed sideways and three and two bunches of curls fall on right and left side of the central parting line, respectively. The remaining portion of the hair has been arranged at the back in a *jūṛā* fashion (fig. 37, 11).

Male hair style

Male figures do not reveal much variety in the hair styles, as they generally occur in a very limited number. Among the available figurines also the head of majority of the specimens is broken. Thus, our knowledge regarding the types of male hair-do upto the end of 1st Cent. B.C. is nil. However, the strata of the subsequent period dated between 1st and 3rd Centuries A.D. have yielded a few male figurines. Among these too, there is only one specimen, wearing a *mukuṭa*, which shows some curled locks falling on the forehead (fig. 37, 12). However, the

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crown in fact hides the details of hair arrangement. Long side locks may be mentioned as another important feature. The figures clearly represent a higher stratum of the society, as indicated by the crown it wears.

It is only during the Gupta Period that we find a fairly sufficient number of male figurines, which enable us to throw some light on the hair styles. However, it is difficult at times to identify the sex of those figures, as in many cases, only heads are available and the coiffures worn by the males and females appear to be almost identical. The following male hair styles have been noticed during the age.

In most of the cases it is noticed that like women, men also generally wore long hair and a part of it was arranged in a knot at the top of the head and the remaining hair fell on either side reaching the shoulder or little above it. Similar figures have been reported from Kumrahar[1] and Ahichchhatrā[2] also, and, at the latter place, they have been identified as *Chhatrākāra-Śirāḥ*, as the arrangement looks like an umbrella to a great extent.

The following representative styles coming under this group have been recognised.

(1) *Hair spread on the head without Simanta*

(a) The hair are spread on the head with a knot at the top of the head and simple curled side locks reach upto the shoulder (fig. 37, 13).

(b) It differs from the above in having *jaṭā* like hair. The side locks appear on both sides in four parallel rows (fig. 37, 14).

(c) The style (fig. 37, 15) is distinguished by a double top-knot and a single row of spiral curls on sides. Similar arrangement is reported from Ahichchhatrā[3] also, but it differs from that of our specimen in the representation of a parting line.

(d) The head is covered by locks of hair, all radiating from the top-knot (*Śikhaṇḍa*) (fig. 38, 1, 2, 3, 4). The specimens belonging to this group represent several variations, differing from each other on account of the arrangement of their top-knots and the falling side locks. In majority of the cases the top knots are plain and simple, but at times they are also tied by ribbons (fig. 38, 4). Some variations in the representation of the side locks of different figures have also been marked. They are shown falling on the two sides in two, three, four or more tiers, usually of equal length, save for a single example in which two hair-locks appear on one

1. Altekar, A.S., & Mishra, Vijayakanta, *op. cit.*, (1959), p. 116, pl. XLVI, 2, 3, 6, XLVII, 4.
2. Agrawala, V.S., *op. cit.*, (1947-48), pl. XLIX, A.B. p. 138.
3. Agrawala, V.S., *op. cit.*, (1947-48), p. 141, pl. XLIX, B, 147.

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side and one on the other (fig. 38, 4). Similar specimens are reported from Ahichchhatrā[1] also.

(e) Some of the specimens exhibit only sidelocks unassociated with top-knot (fig. 38, 5). Their occurrence in a low frequency at this place may probably suggest less popularity of this hair style. Specimens with similar characteristics also appear at Ahichchhatrā.[2]

(2) *Hair spread on the head with Sīmanta* :

The specimens of this group come under the class of *Chhatrakāra* with *Śimanta*, according to Agrawala.[3] The style is identical with that of the preceding specimens, except the central parting, which appears to be distinguishing feature of this hair-arrangement. Like the preceding group, they are also shown with top-knot and side-locks falling on both the sides. The following variations in the style have been recognized.

(a) The side locks are spiral and appear in two parallel rows. The top-knot occupies a central position (fig. 38, 6).

(b) It differs from the above in having *jaṭā*-like hair with the side-locks receding in two tiers (fig. 38, 7).

(c) In this style the hair locks have been neatly arranged in four tiers on both the sides and extend almost upto the shoulders. The top-knot has been tied by a string of beads or pearls (fig. 38, 8). Similar specimens have also been reported from Ahichchhatrā.[4] A head of a figure, whose sex is difficult to determine, shows arrangement of the hair in simple locks in three receding tiers reaching approximately upto the ears. This style is rare as only single specimens of this style has been found (fig. 38, 9).

Besides, there are also some examples to suggest that at times men wore uncurled locks of hair. In these representations, the hair was first parted in the middle and a part of it was arranged on the apex of the head in a dome like shape (fig. 38, 10). The remaining hair fall sideways in such a manner that they cover the ears and reach a little above the shoulder. In another varient of this style the uncurled side locks are taken above the ears on both sides in a manner that they are exposed to view. This might have been done with a view to exhibiting the ear ornaments (fig. 38, 11).

1. Agrawala, V.S., *op. cit.*, (1947-48), pl. XLIX, A. 138, 143.
2. *Ibid.*, pl. XLIX, p. 138.
3. *Ibid.*, pl. XLIX, A. 139.
4. *Ibid.*, pl. XLIX, A. 137.

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(d) In another variation the locks become comparatively smaller and form seven or eight tiers. The space between the two sidelocks is occupied by an indeterminate object (fig. 38, 3).

(e) The style is distinguished by the four tiered spiralled locks on either side with an inconspicuous top-knot in the centre. The ears along with the rings are partly exposed to view (fig. 38, 12).

In view of their arrangement, some of the male coiffures resemble, to a great extent, with those of the females. That represented by figure number 38, 13 differs from the similar female coiffure (fig. 36, 14) only on account of its conical top-knot. Male figures with similar hair arrangement are reported from Kumrahar[1] and Vaiśālī[2] also. Similarly another male figure (fig. 38, 14) also represents a variation of the female coiffure (fig. 37, 2).

There are some other heads in which the hair has been shown in curly ringlets falling down the neck and held in position by a head band, running round the skull (fig. 38, 15). A part of the hair was also arranged in a slight top-knot. In this arrangement there is no indication of brushing and parting of the hair. The curly ringlets represented in this figure may be indentified with the *Chūrṇa Kuntala* of literature.

A boy is shown in an extremely charming and attractive head-dress for which there is no parallel in the contemporary and preceding ages in Varanasi. A few locks coming out of it on the top have been naturalistically delineated (fig. 38, 16).

It is thus clear from the above study that only Gupta period affords ample material for the study of male coiffures at this place. Like the women, males also generally kept long hair and the common fashion was to keep a knot at the apex of the head which was further combined with side locks, reaching upto the neck or shoulder. The fact that there are very few instances in which men are represented without top-knot, suggests the immense popularity of this arrangement. The use of hair ornament in the case of male figures is comparatively scarce. It appears that the people had great fascination for long and curly hair. Specimens belonging to the *Chhatrakāra* group, with several variants have been recovered in a fairly large number.

The above study shows that the history of coiffure in Varanasi can be traced back to the early phase of the NBP ware culture (c. 600–400 B. C.). In their earliest representation the hair are simply combed back without any elaboration. A change in style is, however, attested to by a specimen,[3] probably towards the

1. Altekar, A.S., and Mishra, Vijaykanta, *op. cit.*, (1959), p. 116, pl. XLVII, 6.
2. Sinha, B.P., and Roy, Sita Ram, *op. cit.*, (1969), p. 161, pl. XLIX, 5, 6.
3. The specimen comes from Bharat Kala Bhavan and assignable to the Mauryan age on the stylistic ground.

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late phase of this culture, in which the hair is tied into a *jūṛā* style on the top of the head. Thus, the history of the *jūṛā* in Varanasi goes back roughly to the Mauryan age. This fashion continued to be in use in the succeeding periods in variety of styles, according to the taste and prevalent fashion of the age.

The first phase of the succeeding Period III (C, 200 B. C. to the beginning of the Christian era) is important for the introduction of two noteworthy hair accessories, *viz.*, (i) the use of false hair or some other material in the making of the top-knot and (ii) the use of ribbons or strings to tie the knot. According to the evidence in hand, looping and knotting of the hair also started during this age. No such method was noticed in earlier periods. This phase may also be credited with the introduction of parting the hair, as in one case it is shown on the left side.

When we come to the latter half of the period, roughly assignable to the Kushāṇas (Ist-3rd Cent. A.D.), we notice a distinct change in the representation of coiffures. The fashion of tying the long hair in a knot differs to a great extent from that of the earlier half of the Period III. They were sometimes coiled on the top of the head or gathered in the form of a dome or the same was shown on the extreme right. Some women wore their hair like a modern '*Choṭī*'. Similar fashion of arranging the hair can be traced in Gandhar, Mathura, Bharhut and Sanchi suggesting its popularity in an extensive area. Among the accessories of the hair decoration, which came into fashion during this phase, mention may be made of some forehead ornaments and hair pin like objects. All these, excepting the latter, became important items of hair decoration and used extensively in the succeeding Gupta age also. It is interesting to note that these two items are noticed only on those figures, which appear to be those of foreigners in their looks and dresses. Can it be inferred from the above that these objects were introduced in this region by some external agencies, and some of them became popular among the local population in due course of time, particularly during the succeeding Gupta Period (?).

The coiffures of the Gupta age are of varied patterns and evince inventiveness and originality of the people. The new hair styles correspond, in some cases, to the contemporary literary descriptions, like those of *dhammila*, *barhābhārakeśa*, *chūrṇakuntala alakā*, *Śikhaṇḍaka Śikhā*, *etc.* A clear cut change in the mode of hair-do is demonstrated in majority of the figurines of this age. The study reveals that they have very close similarities with some of the specimens recovered from Ahichchhatrā, Mathura, Kumrahar and Vaiśālī. This may suggest that some modes of hair arrangements were in vogue in a very vast area, and, Varanasi was perhaps one of the leading centres in fashions of coiffures. The ladies always preferred to make knots, on the top of the head, on one or both the sides or at the back of the head in different manners. They exhibit remarkable resemblance with the modern *jūṛā* suggesting their survival down to this age. There are very few illustrations of

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this period in which the hair have been simply combed back and left free. Some of the hair styles prevalent among women were very common such as trefoil with several variants and honey comb. Specimens revealing identical hair-do have also been found at other places like Ahichchhatrā, Kumrahar and vaiśālī. In the trefoil groups, special mention be made of *Bhramaraka* style and *Sīmanta* with *Chaṭulā tilakamaṇi*. They occur both at Rajghat and Ahichchatrā. Among the other hair arrangements peacock feather and *Abhisārikā* styles are also noticed at both these places. Some of the coiffures noticed at Varanasi are, however, unparalleled and do not seem to occur at other centres. They may thus point out to the inventive capabilities of the local population. The *Ekaveṇī* of the preceding period did not continue in the Gupta period. It may, however, be noted that it was perhaps not popular even at the time of its introduction. It finally lost the favour completely during this age.

Among the accessories of the hair-do, the ribbons and forehead bands appear to be innovations of the Gupta period. The former was frequently used mostly to tie the knots, whereas, the latter was restricted to a certain class of figures.[1] Strings made of beads or pearls were other important articles which were commonly used to embellish the coiffure. Another important item that was introduced during the age was the hairnet probably made of pearls or beads. It appears to have been used by the rich class of women of the society, as it is generally noticed on those figurines only which wear profuse jewellery. The use of flower to decorate the tresses also appears to have been started during this period only. It is during this age that we notice the practice of using a piece of cloth to cover the knot either completely or partially. Similar practice was also prevalent at Ajanta.[2]

The foregoing discussion of coiffures naturally leads to the suggestion that much care was taken of the tresses during the different phases of ancient India in general, and, the Gupta period in particular. Perhaps they might have been regularly cleaned, oiled and nourished with some paste. Agrawala surmised that "the female toilet experts employed scented paste and powder in order to secure the effect of spiral twisting."[3] A majority of the figures shows that a great stress was laid on keeping long and curly hair to look more attractive and beautiful.

1. It is suggested by Dhavalikar that these forehead bands, after their introduction by the Harappans, went out of vogue for quite a long time and were "very much in vogue in the classical world." Greaco-Romans may, therefore, be credited with the introduction of bands in India.
   Dhavalikar, M.K., *op. cit.*, (1973), p. 60.
2. Dhavalikar, is of the view that this fashion was also common in Greece and introduced by Greaco-Romans in India.
   Dhavalikar, M.K., *op. cit.*, (1973), p. 61.
3. Agrawala, V.S., *op. cit.*, (1941), pp. 1-8.

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It is true that we have no archaeological proof of these Pastes which might have been responsible for twisting the hair, but it is equally difficult to assume that the large variety of curled hair locks, represented by scores of terracotta figurines, were made without resorting to some artificial process. This appears to be particularly significant with reference to the Gupta Period.

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7

Toilet Accessories

Various items, presumably used in the toilet, have been brought to light by the excavations at Rajghat. Their description and probable interpretation form the subject matter of the present chapter, which thus, deals with an important aspect of the luxurious life of the ancient people of Varanasi. The ancient Indian people in general and ladies in particular appear to have been extremely conscious about grooming themselves with the help of a fairly long range of toiletry, and this was perhaps an important part of life in every age. Ancient Indian literature of various periods makes frequent references to toilet accessories and their use. However, the archaeological data on this aspect of life are generally inadequate, and the history of various toilet activities during different periods cannot be fully stated solely on their basis. It is also important to note here that some of the toilet articles such as antimony rods, skin-rubbers and combs are almost universal both in point of time and distribution. For example, all these, except the comb, appear to be almost essential cultural equipments on the early historical sites in the eastern Uttar Pradesh and western Bihar. The emergence of any new shape in them may be treated as local innovations.

Our knowledge regarding the type of cosmetics used by the people is also very meagre and derived solely by indirect evidence. Actual samples of oil and collyrium have never been found from any of the archaeological site of the subcontinent, but their existence in various periods may be inferred by the presence of such antiquities as combs, the terracotta figurines, showing elaborate coiffures, and the antimony rods. They occur practically in all the periods of Rajghat. The existence of some paste to paint designs on the forehead and other parts of the body may also be suggested by the discovery of a shale designer (pl. XXXII, C), as well as, their depiction in some of the terracotta figurines. But the exact nature of the paste remains a mystery. However, the Buddhist texts may prove to be of immense value in this regard. In the Jātakas[1] and the Aṅguttara Nikāya[2] the words like *Kāsivilepana* and *Kāsika-chandana* occur, which

1. Fousböll, Vol. I, p. 355.
2. *Aṅguttara-Nikāya*, III. 391, IV. 281, G.S.I. 128.

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may point out to the use of cosmetics in Kāśī kingdom. The sandal wood might have been used in many ways like preparing powder, perfumes, oil, paste, *etc.* Its use as powder and oil is also attested to by the literature.[1] The perfume for which Kāśī was once famous, also would have been in an existence,[2] but its nature can not be ascertained. The elaborate coiffures, as noticed in the terracotta figures of different periods, also presuppose the use of cosmetics like oil, *etc.* In the following pages, an attempt (see chapter on coiffure) has been made to throw some light on the toilet activities of the ancient people of Varanasi with the help of a limited number of objects recovered from Rajghat through excavations.

Bath

The bath must have been an essential part of the toilet in every age. This is confirmed by the occurrence of terracotta skin rubbers practically in all the periods under study. Like modern times, a good number of people of ancient Varanasi might have taken their bath in the Ganga, as the river flows quite close to the site. However, some of them might have preferred to take their bath near the wells in or outside the bathrooms. Just as in the present day Varanasi many of the old houses, built near the river Ganga some two hundred years ago or a bit later, do not have a separate bath room, a fair number of residential structures, unearthed at Rajghat, did not seem to have any provision for taking the bath within the four walls. However, it may be emphasised that every house does not necessarily contain a bath room, since its provision or otherwise in a house also depends, to a great extent, on the socio-economic status of the owner. It is only fair to admit here that not many complete house complexes had been exposed at Rajghat, and, thus, it is indeed difficult to determine which type of houses had the bath rooms and vice versa. In most of the cases only one or two rooms of a complex have been partially or fully exposed, representing an incomplete picture of the house plan.

In the Periods I and II of Rajghat, there is obviously no evidence for bath rooms, as burnt-brick structures are absent in these phases. But the existence of wells in these periods cannot be altogether denied, as some of the very deep ring-wells reaching upto the natural soil and some time going upto the stratum of sub-soil water, might have served their purpose. However, the view expressed earlier that ancient people of Varanasi used to take their bath near wells is supported by an evidence of a complex, where a domestic well and a bathing platform were unearthed from an early phase of the Period III.[3] A drain was also found

1. Fousböll, Vol. II, p. 373 (chandanasāra), vol. VI, p. 480.
2. Cowell., Jātaka no. 80.
   Buddha as a prince of Kośala is described as offering Banaras perfumes to his servant.
3. Narain and Roy, *op. cit.*, (1976), p. 26. fig. 5.

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attached with this complex for the outlet of the water. Since not many house complexes belonging to the early phase of the Period III were exposed, it would be rather unreasonable to surmise that the people of this age had no provision for a separate bath-room.

The late phase of the Period III is particularly important for the evidence of bath rooms. A few complexes exposed during the year 1977-78 to be particularly important from this point of view. We shall take here three complexes for a detailed discussion, including the one coming from the earlier digging.

A very important and complete plan of a house (fig. no. 9, 25) assignable to the period, under discussion, was unearthed during our excavation of 1977-78. The entire complex comprises of five rooms, two facing the east and three facing the north. A room located in the south-western corner of the house and measuring 2.64×1.62 *m.* (fig. 9, 25 b) is important in this respect, as it could have been used as a bath-room. In comparison to the other rooms it is smaller in size, and thus could not have been used for living purpose. Further, we have also no evidence to suggest that it was used as a kitchen or any other purpose. On the other hand, it is important to note that it is also attached to a drain running east-west, presumably to carry refuse water from the room. A big sized pot, found in this room possibly for storing water also supports the above view. Thus, on the above grounds, it may reasonably be concluded that the above house complex was attached with a bath-room.

The second evidence comes from another complex (fig. no. 6), which was also recovered during our excavation of 1977-78. It was built in two successive structural phases of the period. In the first phase one big room (No. 35) on the eastern side and a small room measuring 2×1.42 *m.* having a domestic well with a provision of a small drain on the western side (fig. 6, 35a) was constructed. It seems that during this phase the room having the well was used both for taking water from the well and for bathing purposes. It was during the second phase of this period that a small apartment measuring 2.08×1.18 *m.* was added (fig. 6, 38a) to the complex to the north of the well-room, presumably with a view to using it exclusively as a bath-room. This added apartment was provided with a drain, running east-west and north-south, which was also found connected with the adjoining room of the well, to carry off the surface water of the latter. The floor was also paved with bricks. It may be surmised that the occupants of the house, after taking water from the well, used to take their bath in this small adjoining room.

The third evidence also (fig. no. 10) comes from a house-complex which was only partially exposed during the earlier diggings. The entire house is located in an enclosure. An important feature of this plan is the layout of the drain running throughout the complex. On the eastern end of this house is located a brick lined

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well with a platform measuring $2.20 \times 1.50m$. A drain is also attached to the well. This place could have been used both for taking water from the well as well as for bathing purposes. The existence of a pot placed nearby, on the platform, also strengthens the above view. Although it is not found in a room, the privacy is fully maintained by the enclosing walls.

As mentioned earlier, all these provisions of separate bathing places would have been possible only in the case of the houses, owned by the rich or well-to-do persons. Those who could not afford to have any one of these provisions, might have been taking bath in the river or at the public wells.

During the Period IV, we do not find any evidence of bath rooms, as has been noted in the preceding period. The small number of complete house plans, the disturbed nature of the deposit and lastly the limited area undertaken for the excavation may be mentioned as some of the reasons for the absence of this feature. As the Gupta period is generally regarded as an era of prosperity, the likelyhood of bath rooms in the houses cannot be denied. A reference may be made in this respect to the evidence of "a house containing a limeplastered rectangular bathing tank,"[1] unearthed by Krishna Deva in his earlier digging. Since he has not mentioned its location and other details, it is not possible to say any thing about it. However, it may be surmised that there were such houses also which had their own tanks presumably for bathing purposes.

Skin-Rubber

Among the bath accessories, mention may be made of the terracotta skin rubbers. (pl. XII, A), which were used in all the ages in ancient Varanasi, right from the earliest period. We do not have any information regarding other items used at the time of bath. It is generally believed that the body was rubbed with the skin-rubbers to remove dirt from the body. To make these rubbers useful and effective, their surfaces were made rough by incising net-patterns, criss-cross or square patterns or longitudinal lines. The other method of roughening the surface by mixing materials like *bajarī*, lime *etc.*, with the clay as, noticed at Taxila, was not in practice at this centre. Almost all of our specimens have been roughened by executing incised designs, which do not show much variation, although examples having smooth surfaces on both sides were also in existence in a very limited number. A total number of twenty four specimens of terracotta skin rubbers was obtained from the different periods of Rajghat. Of these, only thirteen were found from the different stratified levels, while the rest are unstratified. Presently known in this region as *Jhānvā*, it is still in use in the villages. The shapes of these objects were either rectangular, roughly square or circular. While the

1. Krishna Deva, Excavations at Rajghat Near Benares, *op. cit.*, pp. 41 ff.

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rectangular type catered the taste of the people of all the periods, the other two shapes are represented by only one and two specimens respectively, and they too, come from unstratified deposits. The earliest occurrence of these skin rubbers was noticed in the pre-NBP deposit, but they continued to be in use till the Gupta period and onwards at this place. The most beautiful representations unfortunately come from the unstratified deposits. They bear elaborate and delicate designs, executed by hand. The size of most of these skin rubbers cannot be determined, as majority of them are broken. However, a few complete specimens have also been found, which come from a period between Ist and 3rd Centuries A.D. They all vary in size. Their dimensions are noted as below:

(a) Length 80, Breadth 45 and thickness 17 *mm.*
(b) Length 70, Breadth 45 and thickness 13 *mm.*
(c) Length 75, Breadth 70 and thickness 16 *mm.*

The skin rubbers had a very wide prevalence both in time and space. They are reported from a number of sites. In the Gangetic Valley, they occur at Hastinapura,[1] Atranjikhera,[2] Masaon,[3] Kumrahar,[4] Vaiśālī,[5] *etc.* A study of these from other sites will show a wide range of shapes. But our specimens tally with those reported from the last two sites. Some of the specimens noticed at Taxila are distinguished by the addition of loop-handles.

It may be presumed on the testimony of literature,[6] that after the bath people made use of cosmetics. The hair was perhaps first oiled and then combed, the eyes were presumably stained with kohl or some other black substance. Such a practice was prevalent in all the ages, as proved by the presence of combs, elaborate delineation of coiffures in the terracotta figurines and antimony rods. The forehead was decorated either by *tilaka* or some other design, as is customary even today. Perhaps, there is also an evidence for depilatory. The items associated with the above mentioned toilet-activities are dealt with in detail in the following space.

Comb

Comb formed an essential article of toiletry. The use of comb has a long tradition in India. The earliest dated specimens belong to the Harappan culture.

1. Lal, B.B., *op. cit.*, (1954-55), pl. XLVII nos. 4, 5.
2. *IAR*, 1962-63, Pl. LXXA.
3. Personal observation.
4. Altekar, A.S., and Mishra, Vijay Kanta, *op. cit.*, (1959), p. 126, Pl. LXVIII, 2, 5.
5. Sinha, B.P., and Roy, Sita Ram, *op. cit.*, (1969), p. 203, pl. XCIV. It has been suggested by the excavators, on the basis of the Chirand evidence that, "such skin-rubbers were used as corn-rubbers also, as the objects were found with corns stuck to their cavities."
6. For details see pages 1 and 2 of this Chapter.

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In the historical period they have been reported from Taxila,[1] Nevasa,[2] Nagara,[3] Prakash,[4] Ujjain[5] *etc.*

The excavations at Rajghat yielded only four specimens (pl. *XXXII*, A). The earliest one dates between C.400 and 200 B.C., while the rest were recovered from the late phase of the Period III and the Period IV. However, the presence of combs may be suspected even in the earlier period, datable between C.600 and 400 B.C., as two terracottta figurines of this phase exhibit well combed hair. The ivory seems to have been a popular material for manufacturing combs at other places, but we have found them only in bone,[6] at Rajghat, all the specimens having their teeth on one side. There is only a single specimen, which is decorated by incised designs, while the rest are plain. The following types of combs have been noticed :

(i) Comb probably provided with a grip on the other side.

(ii) Comb with straight top (of both plain and decorated varieties).

(iii) Comb with rounded top (of plain variety only).

All these types are still current in this region. The group (i) is represented by a solitary specimen, measuring 5 *mm.* in thickness. Although no comb from the earliest phase of the Period III is found, the presence of a few terracotta figurines with elaborate coiffure obviously points out to their use. The combs of the late phase of the Period III show some new features. A specimen decorated with incised designs on both the sides, having straight flat top appears for the first time in this phase. Another notable discovery is a complete example of a small comb with straight top. Its maximum length is 6.9 *cm.* According to Marshall, the small specimens were used as ornaments in the hair.[7] In this connection it is interesting to note that the tradition still continues in some of the Indian tribes.

The succeeding Period IV is marked by the occurrence of a distinct type which was so far unknown in Varanasi. The specimen is made of polished bone and has a rounded top, probably for a better grip. The length and thickness of the specimen are 6.8 *cm.* and 6 *mm.* respectively. The contemporary literature also abounds in references to combs.[8]

1. Marshall, *Taxila.* Vol. II, p. 655, pl. 199. nos. 18-23.
2. Sankalia, H.D., *et al.*, *op. cit.*, (1960), p. 467., fig. 197, 5-8.
3. Mehta, R.N., *op. cit.*, (1968), fig. 64, 19.
4. Thapar, B.K., *op. cit.*, p. 129, pl. XXIX, 7.
5. *IAR*, 1957-58, p. 36.
6. An ivory comb from the Śuṅga level is mentioned by Motichandra, but the author frankly admits his ignorance of this find. Motichandra, *op. cit.*, (1962), p. 65.
7. Marshall, *Taxila*, Vol. II, p. 655.
8. Upadhyaya, B.S., *India in Kālidāsa*, pp. 204-5.

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Antimony rod

Antimony rods or Kohl sticks have been reported from all the periods at Rajghat (pl. *XXXIII*, A). All the forty seven specimens, found in the excavations, are made of copper. It is believed that collyrium or some such black substance was applied to the eyes with them.

The antimony rods have a wide range of circulation in time and space both outside and inside India. Their use, since early times, in Egypt as also at Mohenjodaro and Rome is well known. In the Gangetic Valley their earliest occurrence is reported from the Period II at Hastinapura. They continued to be used more or less in their early form down to the end of the 17th Century A.D., as revealed by the evidence unearthed at Rajghat. The Kohl sticks are still in use, though their form has undergone modifications in the course of time. Other Indian sites where these antimony rods have been found in the historical periods are Nasik,[1] Nevasa,[2] Maheshwar,[3] Prakash,[4] Hastinapura,[5] Śrāvastī,[6] Rairh,[7] Ujjain,[8] Nagda,[9] Ahichchhatrā,[10] Masaon,[11] Vaiśālī,[12] Chirand,[13] Bangarh,[14] Sonpur,[15] Kumrahar,[16] Taxila,[17] Amreli,[18] Nagra,[19] Paunar,[20] *etc.* They are variously made of copper, bronze, bone, ivory, *etc.* That the antimony rods formed an important item of the toiletry in the different periods of ancient India, is amply supported by numerous references to them in various classes of literature. In the Buddhist literature[21] and the works of

1. Sankalia, H.D., and Deo, S.B., *op. cit.*, (1955), p. 108.
2. Sankalia, H.D., *et al.*, *op. cit.*, (1960), p. 409.
3. Sankalia, H.D., *et al.*, *op. cit.*, (1958), p. 209, Fig. 108, 6.
4. Thapar, B.K., *op. cit.*, fig. 39, 1-3.
5. Lal, B.B., *op. cit.*, (1954-55), fig. 30, 1-4.
6. Sinha, K.K., *op. cit.*, (1967), p. 66, fig. 20.
7. Puri, K.N., *Excavation at Rairh*, p. 42, pl. XXI, 10, 12.
8. *IAR*, 1957-58, p. 36.
9. *IAR*, 1955-56, p. 14.
10. *IAR*, 1963-64, p. 44.
11. *IAR*, 1970-71, p. 39.
12. Deva, Krishna and Mishra, Vijayakanta, *op. cit.*, (1961), p. 66, pl. XXV, also Sinha, B.P., and Roy, Sita Ram, *op. cit.*, (1969), pp. 195-97.
13. *IAR*, 1971-72, p. 6.
14. Goswami, K.G., *Excavations of Bangarh*, pl. XXV.
15. *IAR*, 1960-61, p. 5.
16. Altekar, A.S., and Mishra, Vijaykanta, *op. cit.*, (1959), p. 135.
17. Marshall, *Taxila*, Vol. II, p. 585.
18. Rao, S.R., *Excavations at Amreli*, Bulletin Vol. XVIII, Baroda, (1966), p. 108, fig. 29, 5.
19. Mehta, R.N., *op. cit.*, (1968), p. 114, fig. 54, 8-9.
20. Deo, S.B., and Dhavalikar, M.K., *Paunar excavations*, 1967, Nagpur, (1968), p. 97.
21. *Chullavagga*, V, 28, 2.

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Kālidāsa,[1] a kohl stick has been referred to as *añjana Śalākam*. *Mahāvagga*[2] supplies important information regarding the different materials used for this object. *Suśruta*[3] also refers to antimony rods made of various materials. However, in the region of ancient Magadha and Kāśī, majority of them was made of either copper or bronze, as revealed by the evidence brought to light by the excavations at Masaon, Vaiśālī, Kumrahar and Rajghat. The specimens of ancient Varanasi are exclusively made of copper. These small rods are provided with rounded ends or slightly tapering pointed ends. Whatever, doubts one may have regarding the identification of these objects with antimony rods or kohl sticks, they should be removed by the remarkable similarity between the form of the actual excavated specimens and the description of *Añjana śalākam* found in the *Suśruta Saṁhitā*.[4] According to this famous work on *Āyurveda*, "both ends of the antimony rods should be in the form of *mukula* (bud of a flower known as *Mallikā*) having pea size thickness. It should be eight angulas long, thin in the centre and well made affording an easy grip." Our specimens agree, to a great extent, with those reported from Vaiśālī, Kumrahar and Taxila. The antimony rods found at Rajghat may be grouped as follows.

(a) Circular rod with rounded ends,

(b) Circular rod with tapering pointed ends,

(c) Rectangular rod with thickened ends, and

(d) Circular rod without rounded or pointed ends.

The specimens belonging to the group (a) are commonly found in all the periods, besides being antimony rods, their ends could also have been used for putting small dots or *tilaka* on the forehead or other parts of the body. The examples of this form were encountered at the earliest level of Rajghat and continue to occur in the subsequent periods. This type occurs in majority of the other sites also. In the late phase of the Period II (C. 400-200 B.C.) appear for the first time specimens of the group (b) Apart from smearing the collyrium in the eyes, this type having pointed ends could have been used for drawing sharp lines near the eyes, as it is done to-day. Some of these are quite thin in the middle. There are thicker varieties also, but, in Varanasi they are noticed in the Gupta period only. Identical specimens are reported from Vaiśālī and Kumrahar also. Their finest

1. *Kālidāsa granthāvalī*, *op. cit.*, *Kum*, 1-47, 7-59, *Raghu*, 7-8.
2. The antimony rods made of various materials were in use such as gold, silver, bone, ivory, horn, reed, bamboo, wood, lac, fruit, bronze and chank shell. The bhikkhus were not allowed to use the antimony rods made of the first two materials. Referred to in *Mahāvagga*, VI, 12, 2.
3. *Suśruta Saṁhitā* (commentary by Shastri, Ambika Dutta) pt. II, Varanasi, (1959), 18, 62-63.
4. *Suśruta Saṁhitā*, 18, 62-63, also 17, 84.

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examples are generally found in the late phase of the Period III and the Period IV. The specimens of group (c) and (d) appear to be rare types, present only in the late phase of the Period III, and going out of vogue immediately afterwards. They vary in size and thickness. The use of the specimens of group (d) as antimony rods is doubtful, as they contain neither rounded nor pointed ends.

Most of the antimony rods found at Rajghat belong to the late phase of the Period III and the Period IV. Their length ranges from 9.5 *cm.* to 13.8 *cm.* and the thickness varies from 2 *mm.* to 6 *mm.* The smaller specimens of the Period III were presumably meant for children, since their ends are also thinner than those of the bigger antimony rods. On the other hand the longer specimens, sometimes having thickness of 6 *mm.* on the ends were exclusively made for the grown up people. However, such a distinction is not possible among the kohl sticks of the Period IV, as in spite of varied length of different specimens, the thickness on the ends remain almost the same. The specimens with tapering working ends are in majority in this period. The antimony rods of the Period IV are generally better made than those of the preceding period. Two specimens, one each from the late phase of the Period III and the Period IV are also decorated in the middle. The specimen from the latter period is generally circular in section, except in the middle, where it is thicker and has a roughly square cross-section. It was meant probably for the grip.

The presence of antimony rods in all the periods under review presupposes the existence of two other items, *viz.*, the collyrium or some other similar substance and its containers. Evidently, there is nothing from the excavations at Rajghat, which can prove the existence of either of them. However, various works of ancient India, including *Mahāvagga*,[1] *Suśruta Saṁhīta*,[2] *Rasaśastra*[3] and the works of Kālidāsa,[4] contain a large number of references to both Collyrium as well as its container.

1. Five kinds of eye ointments are referred to in the *Mahāvagga*, *viz.*, black collyrium, *Rasa* ointment (*rasāñjana* '*Sota*' (*srotāñjana*) *geruka* (*gairika*) *Kapāllan* (soot taken from flame of a lamp). It supplied information about the Kohl containers also. Buddha permitted the use of Kohl containers to the *bhikkhūs* variously made of bone, ivory, horn, the nala, reed bamboo, wood, lac shells of fruits, bronze and centre of the chank shells. The containers made of gold and silver were forbidden to the *bhikkhūs*, *Mahāvaggam*, VI, 11, 1, 2. VI, 12, 1.
2. Suśruta discussed the qualities of *añjana* and suggested that the use of collyrium in the eyes is useful in many ways. *Suśruta Sāṁhitā*, 12, 34-35, 17, 8-9, 10-11, 12-14, 18-19, 35, 18, 74-75. He also provides information about containers, 18, 61. Iron Kohl containers are also mentioned by him.
3. Five kinds of *añjana* have been mentioned.
   Atrideva Vidyalankar; *Prāchīna Bhārata ke Prasādhana*, (Hindi) Bhāratīya Gyāna Pīṭh, Kaśi, (1958), pp. 69-70.
4. *Kālidāsa granthāvalī*, *op. cit.*, *Raghu*, 7-27, 16-59, 19-10, *Kum.* 1-47, 5-51, 7-20, 59, 82.

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Forehead Decoration

If the evidence provided by the terracotta figurines is to be relied upon, it is perhaps during the late phase of the Periods III and IV that the fashion of decorating foreheads with circular or other designs became popular among women. However, this fashion appears to have started much earlier in Varanasi, as suggested by the occurrence of an actual complete specimen of a designer made of shale from the late phase of the Period II (C. 400-200 B.C.) (pl. *XXXII*, C). It is in the form of a circular rod with engraved design of concentric circles on the one end and the flower motif on the other. This was perhaps used to execute the above mentioned two motifs on the forehead or other parts of the body. It may be noted that the flower motif of the designer roughly tallies with those depicted on the forehead of Yakṣī and Chulakokā devatā at Bharhut.[1] References to forehead decorations also occur in the early Buddhist literature.[2] Bharata Muni[3] speaks of several designs of '*tilaka*' imitating flowers. It is interesting to observe that certain types of designers are still in use in this region to decorate forehead. The study of terracotta figurines reveals two types of forehead marks which are as follows :

(i) Pricked dots shown in a circle (fig. 36, 5), noticed on the Kushāṇa terracotta figurines, but the tradition appears to have continued in the Gupta period also.

(ii) Circular applied disc of clay, (fig. 36, 6), which may be a representation of a '*tilaka*' or a metal ornament of a shape of a disc. The ornamental disc is known nowadays in this region as '*ṭikulī*', which seems to have been derived from the word '*tilaka*'. The '*tilaka*' mark on forehead has also been noticed on the figures of Ajanta,[4] Mathura,[5] *etc.* It is also frequently mentioned in the works of Kālidāsa.[6] According to Amarakoṣa, there were four kinds of designs painted on the forehead.[7]

We do not know whether in ancient times the forehead mark was obligatory for married women or not. Kane,[8] examining many literary references, says, it is

1. Zimmer, H., *The Art of Indian Asia*, Vol. II, pl. 33, B.C. pl. 33, b also Cunningham, *The Stupa of Bharhut*, pl. XXIII, XXIV, 4.
2. *Chullavagga*, V, 2, 5.
3. *Nāṭyaśāstra*, XXIII, 22-23.
4. Dhavalikar, M.K., *op. cit.*, (1973), p. 63.
5. Agrawala, V.S., *Masterpieces of Mathura Sculpture*, pl. IV. (Figure of Balrama, Kushāṇa and Gupta period).
6. *Kālidāsa granthāvalī*, *op. cit.*, *Kum.* 3-30, 7-23, 33, *Mal.* 3-5, 4-9, *Raghu*, 18-44.
7. The four designs are *Tamālapatra*, *Tilaka*, *Chitraka* and *Viśeśaka Amarakoṣa*, 2, 6, 123, 2, 4, 40, 2.6.49, 65, 123, 2.9.43., 2.4.51.
8. Kane, P.V., 'Tilaka Mark', *Journal of the Bombay Branch of the Royal Asiatic Society*, (News Series), Vol. 21, (1945), pp. 33-37.

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not clear that the "tilaka mark on the forehead was an absolute necessity, a sine qua non in the case of all married women whose husbands were living." He suggests that the *tilaka* mark was intended only to set off the charms of young ladies. But this was not the position at least in the 11th Cent. A.D. everywhere, as suggested by Gai[1] on the basis of epigraphic evidence.

Mirror

Among all the articles of toilet, mirror was an important equipment for *prasādhana-kalā*. According to Gopinath Rao,[2] in ancient India highly polished metal plates were utilised to serve as mirrors. This view is confirmed by the copper or bronze specimens found at Rairh, Taxila, Brahmapuri, Adichanallur and Basarh.[3] Presumably, it was used for arrangement of hair or beautifying the same with hair ornaments, adjusting other ornaments, application of cosmetics like applying collyrium in the eyes, putting mark or design, *etc.*, on the forehead and for giving final touches to the make-up. No actual specimen of mirror has been found from any period at Rajghat, but its use is attested to by the occurrence of a terracotta plaque[4] belonging to the Śuṅga period, in which a lady with a mirror has been shown engaged in *prasādhana* (pl. XXIV, B). This possibly confirms its use in Varanasi at least in the Śuṅga age. What was the position of this toilet equipment in the periods preceding and succeeding the Śuṅga period is not known. However, the use of mirror between 1st and 3rd Centuries A.D. is amply attested to at other places, namely, Sirkap, Begram, Mathura and Amaravati.[5] The discovery of mirror handles from the Period II at Ujjain[6] is also worth mentioning. In this connection, it is significant to note that we have also found a number of handles made of bone and metal. Can it be held that some of these could have been used as handles for the mirrors ?

1. On the basis of Rewah stone inscription of the time of the Kalachuri King Karṇa he states that, "In the Kalchuri Kingdom at any rate the colour-marks or tilika on the forehead of women did indicate non-widowhood and their absence widowhood in the 11th Century A.D.". Gai, G.S., 'A note on Tilaka and Kankaṇ', BDCRI, Gai, G.S., 'A Note on Tilaka and Kankan' *BDCRI*, Vol. 20, (1960), p. 301.
2. Rao, T.A. Gopinath, *Elements of Hindu Iconography*, Vol. I, pt. I, (1968), p. 12, pl. IV, 7.
3. Margabandhu, C.C., A Note on Some Ancient Indian Mirrors', *Purātattva* No. 7, New Delhi, (1974), pp. 94-95.
4. Motichandra, *op. cit.*, (1962), fig. no. 5. It was obtained from Rajghat, and is now kept in the Prince of Wales museum, Bombay.
5. Dwivedi, V.P., *Indian Ivories*, pp. 77, 93.
   The earlier view of Marshall that it was introduced by foreigners at Taxila is reputed by Dwivedi, and he puts forward the evidence of Rupar and Ahichchhatra in support of his theory that it was known in India much earlier than the Taxila evidence.
6. *IAR*, 1957-58, p. 36.

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Depilatory Activity

The people of ancient Varanasi also used blades for presumably shaving the hair of head as well as other parts of the body, as is evident by the discovery of some actual specimens from the excavations. In this regard the occurrence of two fragmentary copper blades one each from the early phase of the Period II and the late phase of the Period III claims our special attention. Both the specimens are broken in the length, but considering the width and the thickness of the blades, they may possibly be identified as fragments of razor blades. It is interesting to note that according to *Chullavagga*,[1] monks were permitted to shave with razors. No example of iron blade has been found so far, but it may probably be suggested that some of the smaller and lighter varieties of knives could have been used for this purpose also. The fragmentary copper blade from the early phase of the Period II has bevelled edges. The evidence of this instrument is lacking from the period lying between C. 400 B.C. and the beginning of the Christian era. However, the use of razor-blades in the late phase of the Period III is clearly attested to by the discovery of a specimen which has slightly curved edge.

There is also evidence to suggest that the blades were repeatedly resharpened during the use, as a number of sharpeners has been found from different levels. Of course these could have been used for sharpening other instruments like knives, *etc.* The rectangular type was most common. They were well dressed from all sides and are usually made of slate stone, but occasionally also of sand stone. They vary in size and contain use-marks in the form of concavities, normally on the upper surface, but at times also appearing on both the surfaces. Their earliest occurrence in Varanasi is noticed around C. 400 B.C., but they continued to be in use down to the end of the 3rd Century A.D. Besides, there is also a legged specimen of sand-stone obtained from the late phase of the Period III, (pl.XI, B. 1) the shape of which might have been borrowed from legged querns. Similar specimens are also reported from the Indo-Roman period at Nevasa.[2]

Other Toilet Accessories

Besides the above, there are some other items also, which could have been included in the toilet accessories of the people of ancient Varanasi during different periods. In the late phase of the Period II, appears a thin copper rod with circular cross-section, which can probably be identified with an ear-cleaner (pl. XXIII, A, 10.). It has a small scoop on one of its ends, while the other is plain. The scoop could have been used for removing wax from the ear, but it is difficult to ascertain whether the plain end could also serve for smearing collyrium in the eyes.

1. *Chullavagga*, V, 27, 3.
2. Sankalia, *et al.*, *op. cit.*, (1960), p. 475.

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However, such combined specimens have actually been found in the excavations at Taxila and Kumrahar. *Chullavagga*[1] also corroborates the use of ear-cleaner, which has been referred to as *Kaṇṇamalaharaṇī*.

A small casket with a lid, (pl. XXVII, A, 5) made of a soapstone, and derived from the strata of the Period IV, is another important article, which would have helped the people in their toilet, activities. This beautifully made casket with skillfully executed incised designs on its upper surface could have been used for keeping perfume, powder paste or some other similar material. That such specimens were in use in the earlier periods also, is sufficiently corroborated by the discovery of some decorated soapstone lids with small knobs from the late phase of the Period II and the late phase of the Period III. They are similar in form to the lid found from the Period IV, though they are of different sizes.

A reference may also be made in this respect to a small pin like object made of copper with a point on one end and a perforation on the other (pl. XXXIII, A, 13). It was acquired from the layers of the Period IV. Looking at the thickness, form and the size of the object, it may tentatively be termed as a tooth-pick. Besides these, it may also be inferred from the various representations of terracotta figurines of the late phase of the Period III and the Period IV, that the ladies sometimes decorated their hair by pins, bands, nets,[2] *etc.* However, no actual example of any of these items has been found in the excavation at Rajghat.

The foregoing discussion clearly indicates that the toilet items like antimony rod and skin-rubber were used in almost all the periods of Rajghat. In the early phase of the period II, occurs a blade fragment made of copper which may be regarded as an important introduction to the toilet activities. The late phase of the same period exhibits a marked increase in the toilet articles. The new items include some combs, a shale designer, an instrument sharpener, an ear cleaner and a few casket lids. Although there is an indirect evidence for the use of mirror for the first time in the history of Varanasi in the early phase of the Period III, there is, however, some decline in the toilet activities during this phase. It is difficult to account for this decrease in the antiquities needed for toilet.

The late phase of the period III, on the other hand, has yielded the largest number of toilet objects including antimony rods, skin rubbers, combs and casket lids. That the period heralded a sudden increase in the varied toilet activities is amply demonstrated by the numerous terracotta figurines, particularly those of females embellished with elaborate coiffures and jewellery.

During the succeeding period IV, the number of toilet articles shows a

1. *Chullavagga*, V. 27.6.
2. For details see Chapter VI.

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decline, yet there is evidence to indicate that the people were affluent enough to hire the services of the female attendant's required for elaborate toilet. Attention may be drawn in this respect to a terracotta famale figure carrying a basket containing presumably make-up accessories, in the left hand and a spouted pot in the right. The figure may probably be identified with Prasādhikā of the contemporary literature.[1] The period has also yielded such items as tooth-pick (?) (pl. XXXIII A, 13) and a complete example of miniature casket made of soap-stone.

1. *Kālidāsa granthāvalī, op. cit., Kum*, 7-20, 8-27, *Raghu*, 19-26.

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8

Objects Bearing on Food Habits and Kitchen Equipments

It is a matter of common knowledge that the nature of kitchen and the food habits of the users go almost parallel to each other, and, to a large extent, both are interdependent. Ethnographers very often treat them as important aspects of their cultural studies, and write detailed accounts of these patterns. However, it is rather difficult to discuss the food habits of the past cultures and also to describe their kitchen arrangements, particularly when one finds that the available archaeological data are hardly adequate to throw enough light on these aspects and the literary tradition does not contain any worth-noting evidence. In the course of our study, we found ourselves in a similar situation. However, it was possible to identify certain items, unearthed from Rajghat, which could give some idea about the food habits of the people of Varanasi through the ages. Similarly, some other objects could be associated with the kitchen arrangement. But the available evidence were more or less indirect, and could be used for the purpose mostly by applying historical imagination. An attempt has been made in the following pages to discuss the objects which show some bearing on the food habits of the people of ancient Varanasi, and to describe some items, presumably associated with the kitchen. For obvious reasons, some speculation is inevitable in the study.

I

Objects Bearing on Food Habits

This section deals with a very vital item of every day life-the food, and the items associated with it. It may be stated at the outset that direct evidence pertaining to the food habit is meagre. But there are certain objects of varied nature, from which it appears possible to throw some light on the food habits of the people of ancient Varanasi. Among these can be included pestles, pounders, pounder-pestles, querns of different varieties, specimens of cereals, animal bones, ladle, shovel, cooking vessels, *etc.* It is entirely on these objects, the study of the food habits of the people is based.

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The evidence for rice and wheat is represented from the Period III alone. For, the indirect evidence for some of them is available in the form of degraissants in the pottery, and some literary references also attest to their presence in certain periods. But the absence of these and other grains in the remaining periods can be only accidental. It is only in regard to the prevalent practice of flesh-eating, that we are able to get some direct evidence. A fairly good number of animal bones, found in the excavations, bears cut-or chop-marks made by some sharp instrument. The presence of cow and buffalo may lead us to the use of milk and milk-products, like *ghee* and butter. The study of the nature and the surface of utilitarian vessels may be important for determining their use, *e.g.*, fatty substance like oil and *ghee* will obviously need vessels with impervious surface.

Period I

We did not get any direct evidence for cereals from this level. However, a close study of some of the ordinary red ware pots of this period revealed that a type of husk was used as degraissant for this ware. The husk particles were visible in the core of the pots and also adhered on their surfaces. On examination they were found to be rice husk, suggesting the use of rice presumable as diet. Information about other kinds of cereals consumed by these people is lacking.

Similarly, the faunal remains of this phase too are not very helpful in this regard. The total number of species found in the excavation, as is shown in the appended chart 1, was only five, which included cattle, pig, buffalo, sheep and spotted deer. None showed any firm indication that they were consumed as food as they were neither charred nor bore any cut marks on them. It is, therefore, difficult to say whether the people during this period consumed the flesh of any of the domesticated animals or not. However, the occurrence of a few bone points and arrow-heads as well as the remains of the spotted deer showed their involvement in hunting. The presence of cattle and buffalo seems to indicate the prevalence of milk and milk products as part of their diet.

Period II (Early Phase)

Similar to the Period I, the succeeding NBP Ware Culture also did not reveal any specific evidence of grain at this place, and the practice of rice cultivation during this period too, is indicated by the occurrence of husk in pots. The literary texts[1] also testify that rice was a favourite diet of the people in the form of *Odana* and *bhatta*.

Among various antiquities of this phase, three stone pestles need mention in connection with the food habits of the people. In all these specimens, 'working'

1. Mishra, G.S.P., *The Age of Vinaya*, p. 179.

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or 'use marks' are visible. Considering their size and diameter, it may be suggested that they were used for grinding corns. This naturally leads to suggest the existence of wheat and/or some other grain like barley, as normally rice is not eaten after grinding. Moreover, it is significant to note here that this region was producing wheat or barley during this age, as attested to by the excavation of Prahladpur,[1] which is only 81.6 kilometers from Varanasi. It is thus reasonable to assume that the people living in the neighbouring city of ancient Varanasi were also cultivating one or both of these important cereals. Moreover, Varanasi lies even today in the rice and wheat growing zone. Thus, considering all these factors, it may be suggested that the preparations of rice and wheat or barley formed an important part of the diet of the people.

The faunal remains of this phase are particularly important, as they suggest that a large section of the society was consuming animal food. According to the chart, as much as 16 species existed in and around Varanasi during this phase. This list of species includes both the wild and the domestic animals, birds, and aquatic organisms. The occurrence of bones of wild animals may suggest that hunting played a more important role in the life of the people of this phase as a means of procuring animals for consumption than those of the preceding period. This view is supported, first, by the evidence of sudden increase in the frequency of these species (see chart 1), and second, by the occurrence of a fairly good number of iron and bone arrow-heads and points of different varieties in the deposits of this phase (pl. XXXIV, A also pl. XXVII, B). The fowl appears to be a preferred bird species for hunting for the purpose of consumption.

The remains of fish and turtle from the habitation deposit indicate that they were also being consumed as items of diet. The shelled organisms like *Lamellidens marginalis* (fresh water mussel) were also perhaps used as food. It is considered as a highly delicious food even today, and is widely consumed by the lower caste poor people of the region. It is an important item of food among the tribes of Mirzapur district, *viz.*, Korwa, Gonds, Panika, *etc.*[2]

Being nearer the river, it is not unlikely that the people might have depended to a large extent on these aquatic organisms, which were available to them in plenty without much effort.

The remains of the domesticated species like cattle and pig constitute an important evidence for the food habits of the people, as some of these bear cut and chopping marks made by some sharp instrument. These marks clearly suggest that these animals were often slaughtered for consumption. There is a lone

1. Narain, A.K., and Roy, T.N., *The Excavation at Prahladpur*, (1968), p. 65.
2. Information kindly supplied by Shri Bhupendra Pal Singh, Anthropological Assistant, Ancient Indian History Culture and Archaeology, B.H.U.

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example of the charred bone, which suggests that after being slaughtered, the animal was, cut into pieces and, instead of cooking them in the usual method, they were directly roasted in an open fire. This leads us to infer the existence of two important modes of cooking the non-vegetarian dishes, *viz.*, the usual method of cooking in which some utensil must have been used, and the direct roasting, which did not require any vessel.

The presence of a fair number of remains of the young animals like cattle, goat and pig (see chart 2) is a clear indication that the old animals were generally not selected for the slaughtering purpose. This view is further supported in some cases by the unworn teeth-surfaces and unfused epiphysis of these animals. On the basis of all these accounts, it is inferable that the flesh eating was quite prevalent in a large section of the society.

The Buddhist texts[1] of the contemporary period also corroborate the practice of meat eating by the people of Varanasi.

Late Phase

The late phase of this period also did not reveal any direct evidence for cereal. It may, however, be presumed that the suggested cereals of the preceding phase might have continued as important items of food even during the late phase of this culture, as is evident by the presence of rice husk in pottery and some pestles, *etc.*

In the connection of food habits, it is significant to note the introduction of some new pot forms, *viz.*, the *kaṛāhī* with loop handles and the carinated *hāṇḍī*. These two suggest two different modes of cooking, *viz.*, frying and boiling or usual cooking, respectively, although *kaṛāhī* could serve both the purposes. The contemporary literature also enables us to know the uses of these pots. Patañjali[2] clearly mentions that rice or soup was cooked in *sthālī* and refers to four main processes of rice cooking. Pāṇini[3] also refers to the vessels like '*sthālī*'. Similarly, another vessel *kaṛāhī* finds mention in both *Aṣṭādhyāyī*[4] and *Mahābhāṣya*[5] as *Ūkhā*. These were of different sizes and capacity and were used for the preparation of large quantity of food, particularly the cereal food.

It is possible to infer that cow, buffalo and goat, the remains of which have also been found from this period, might have been domesticated primarily for the

1. The story of Suppiya referred to in the *Mahāvagga* makes it clear that meat was also sold regularly in the markets of Varanasi, except on off days (*Mahāvagga*, VI, 23, 2). "Venison was sold at cross roads outside Banaras and there were some villages inhabited by hunters." Om Prakash, *Food and Drinks in Ancient India*, New Delhi, (1961), pp. 63-64.
2. Agnihotri, P.D., *Patañjali Kālīna Bhārata*, pp. 209-210 and 192.
3. Agrawala, V.S., *Pāṇini Kālīna Bhāratavarṣa*, p. 147.
4. *Ibid.*, pp. 126, 147.
5. Agnihotri, P.D., *op. cit.*, p. 193, *Ūkhā* was used in frying the eatables.

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CHART

Name of the animal		Period I (C. 800—600 B.C.)	Period II (Early phase) (C. 600 B.C.—400 B.C.)
1	2	3	4
Bos inidicus	Cattle	Bos indicus	Bos indicus
Sus cristatus	Pig	Sus cristatus	Sus cristatus
Bos (Bubalus) bubalis	Buffalo	Bos (Bubalus) bubalis	Bos (Bubalus) bubalis
Capra hircus	Goat	—	Capra hircus
Ovis arieo dolichura	Sheep	Ovis aries dolichura	—
Canis familiaris	Dog	—	Canis familiaris
Equus asinus	Ass	—	Equus asinus
Equus caballus	Horse	—	Equus caballus
Camelus dromedaruus	Camel	—	—
Elephas maximus	Elephant	—	—
Gavialis gangeticus	Coharial	—	—
Axis axis	Spotted deer	Axis axis	—
Antelope cervicapra	Antelope	—	Antelope carvicapra

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I

Period II (Late Phase) (C. 400 B.C.-200 B.C.)	Period III (Early phase) (C. 200 B.C.) the beginning of the Christian era	Period III (Late phase) Ist Cent. A.D.-3rd Cent. A.D.	Period IV 3rd Cent. A.D. 700 A.D.	Unstratified deposits
5	6	7	8	9
Bos indicus	Bos indicus	Bos indicus	Bos indicus	Bos indicus
Sus cristatus	—	Sus cristatus	Sus cristatus	Sus cristatus
Bos (Bubalus) bubalis	—	—	—	Bos (Bubalus) bubalis
Capra hircus	Capra hircus	Capra hircus	Capra hircus	Capra hircus
Ovis aries dolichura	Ovis aries dolichura	—	Ovis aries dolichura	Ovis aries dolichura
—	—	Canis familiaris	—	Canis familiaris
—	—	—	—	—
—	Equus cabellus	Equus cabellus	—	Equus caballus
—	—	Camelus dromedaruus	—	—
—	—	—	—	Elephas maximus
—	Gavialis gangeticus	—	—	—
—	Spotted deer (Axis axis)	Axis axis	Axis axis	Axis axis
—	—	—	—	—

(Contd.)

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CHART

1	2	3	4
Cervus duvaucelli	Barasengha	—	—
Felis catus	Cat	—	—
Chitra indica	Rwerturtle	—	Chitra indica
Lissemys punctata	Boxturtle	—	Lissemys punctata
Lepus nilgricollis	Hare	—	Lepus nilgricollis
Hystris sp.	Porcupine	—	—
Suncus murinus	Shrew	—	—
Gallus sp.	Fowl.	—	Gallus sp.
Rattus rattus	Rat	—	—
Rita rita	—	—	Rattus rattus
Teleost fish	—	—	Teleost fish
Mystus sp.	—	—	—
Homo sapiens	Man	—	Homosapiens
Lamellidens marginalis	Fresh water mussel	—	Lamellidens marginalis
		5 species	16 species

X—Chart kindly supplied by Shri Bhupendra Pal Singh—Anthropological assistant, Department

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I *(Contd.)*

5	6	7	8	9
—	—	Cervus duvaucelli	—	—
Felus catus	—	—	—	—
Chitra indica	Chitra indica	—	—	Chitra indica
Lissemys punctata	—	—	—	—
—	—	—	—	Lepus nilgriocollis
Hystris sp.	—	—	—	—
—	—	—	—	Suncus murinus
—	Gallus sp.	—	Gallus sp.	Gallus sp.
—	—	Rattus sp.	Rattus rattus	—
—	—	—	—	Rita rita
—	—	—	—	Teleost fish
—	—	—	—	Mystus sp.
—	—	—	—	Homo sapiens
—	Lamellidens marginalis	—	—	—
9 species	9 species	8 species	7 species	17 species

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CHART—2

Periodwise Distribution of Bone Fragments which show Signs of their Probable Food Value

	Indentification of the Animals	Period	Trench No.	Layer No.	Remark
1	2	3	4	5	6
Cattle	Fragment of lower jaw	UNS layer of Period I	RGT A_2	29	Young
Cattle	Right third upper premolar	Period II (Early phase)	RGT XII	17	Young
,,	Fragment of a rib	,,	RGT XIIA	19	Two cut marks.
,,	Proximal fragment of right radius	,,	,,	19	Young
,,	Proximal fragment of left radius	,,	,,	19	Young
,,	Fragment of horn with basal cutting marks	,,	,,	19	Basal cutting mark.
,,	Fragment of shaft of left ulna	,,	,,	19	Young
,,	Proximal fragment of right radius	,,	,,	19	Charred
,,	Fragment of left scapula	,,	RGT XII	20	With spine chopped of
,,	Proximal part of femur	,,	XII A Pit SB	17	With cut mark
,,	Left astragalus	,,	,,	18	With chopping Marks

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,,	Metacorpal	,,	,,		18	With chopping marks
,,	Right astragalus	,,	RGT III Section		27	Young
Goat	Proximal fragment of right tibia	,,	RGT XII		19	Young
,,	Distal fragment of third and fourth metatarsal	,,	XII		19	Young
Pig	Proximal fragment of right humerus	,,	,,		20	Young
,,	Distal fragment of left femur	,,	,,		19	Young
,,	Third lower molar tooth	,,	XII A	Pit SB	15	Young
,,	Left canine	,,	,,		,,	Young
,,	Fragment of shaft of femur	,,	,,		15	Cut marks
,,	Fragment of shaft of femur	,,	,,		15	Cut marks
,,	Fragment of right horizontal ramus with pre molar	,,	,,		17	Young
,,	Distal fragment of left tibia	,,	,,		18	Young
,,	Shaft of humerus	,,	,,		18	Young
Cattle	Right patella	Period II (Late phase)	XII		14	Young
Sheep	Right calcaneum	,,	,,		16	Young
,,	Proximal fragment of radius	,,	,,		16	Young

(*Contd.*)

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CHART 2 (*Contd.*)

1	2	3	4	5	6
,,	Left lower second molar	,,	,,	16	Young
,,	Distal fragment of right tibia	,,	,,	14 A	Young
,,	Distal fragment of metatarsal	,,	,,	14 A	Young
Pig	Proximal fragment of right radius	,,	RGT XII	14	Cut Marks
	Fragment of left horizontal ramus of mandible with second molar	,,	,,	15	Young
Cattle	Distal fragment of tibia	Period III (Early phase)	IV B	3	Young
	Thoracic vertebra	,,	,,	3	Young
	Distal fragment of third and fourth metatarsal	,,	XII	10 A	Young
Sheep	Cervical vertebra	,,	XII A	11	Young
	Proximal fragment of right femur	,,	RGT Section	20	Cut Marks
	Fragment of shaft of third and fourth metatarsal	,,	XII A	10	Young
	Head of the femur	,,	XII	11	Young

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Cattle	Shaft of right humerus	Period III (Late phase)	RGT IV B (UNS)	2	Young
Pig	Fragment of right tibia	,,	RGT Section AI	19	Young
Goat	Distal fragment of left humerus	Period IV	UNS RGT I A_2	18	Young
Sheep	Distal fragment of left tibia	,,	UNS RGT II A_2	2	Young
Pig	Distal fragment of a right humerus	,,	RGT Section	18	Young
	Broken left calcaneum	,,	RGT XII A	6	Cut Marks.

1. This chart has been prepared on the information kindly supplied by Shri Bhupendra Pal Singh of our Department. The registration numbers of these bones are not given as the same was not available.
UNS = Unstratified.

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supply of milk and milk products, like *ghee*, curd, butter, *etc.* This assumption is further corroborated by the appearance of certain new pot forms with impervious surfaces, which might have been used for storing liquids, like *ghee* or oil, *etc.*, (see chapter on Utensils). It is interesting to note in this connection that Patañjali[1] refers to some vessels which were exclusively made for storing *ghee* or oil. Besides, Buddhist literature[2] also informs us about the use of milk and its products, particularly the *ghee*. *Suśruta*[3] prescribes the use of *ghee* in several medicinal preparations. That the milk and possibly also the milk products were important items of the food during this phase is further corroborated by the discovery of a seal of the guild of milkmen, palaeographically datable to circa 1st cent. B.C.

In discussing the food habits of this phase, one is struck by a sudden decrease in the frequency of the remains of the wild animal species and also the hunting weapons of the preceding phase. It is likely that, with the possible increase in the productions of cereals, and also the milk and its products, there was a gradual decline in the consumption of meat. In spite of this, the people remained non-vegetarian to a certain extent, which is fully attested to by the recovery of several remains of the young animals, and also by a bone fragment of a pig, bearing cut marks (see chart 2). The prevalence of meat eating among the people of this period is borne out by Patañjali's work as well.[4] He mentions various meat preparations and the existence of '*mānsapachanī*', *i.e.*, a pot in which meat was cooked.

A general slump in hunting and the presence of a lesser number of animal bones bearing slaughtering marks may possibly imply that grains constituted a major segment of the food of these people. Elsewhere (in chapter III) we have noted certain significant changes in the forms of pottery vessels during this period. It is our surmise that the changes in pottery forms and presumably also in the food habits were not entirely unrelated.

Period III (Early Phase)

Actual specimens of rice and wheat were recovered for the first time from the early phase of the period.[5] In addition to the rice and wheat preparations, the people possibly also prepared another variety of food which was liquid in nature. This is suggested on the basis of the discovery of an iron ladle with a deep ladle

1. Agnihotri, P.D., *op. cit* , p. 195.
2. Misra, G.S.P., *op. cit.*, p. 181,
3. *Suśruta Saṁhitā, Commentary by Shastri*, Ambika Dutt, II pt. Kāśī Sanskrit granthamālā., No. 156, (1959), Varanasi, 9.3-9, 10.4-6, 12.3-9, 52-53, 17.51, 45.17-19.
4. Agnihotri, P.D., *op. cit.*, p. 222.
5. Narain and Roy, *op. cit.*, (1976), p. 51.

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bowl (pl. XXVI, A. 9). It is important to note here that Kauṭilya[1] refers to the use of two types of pulses, *viz.*, *Mudga* and *Māṣa*. "As regards curry or *dāla*, the *Vinaya* knows of *Mugga Sūpa* and *māṣa sūpa*."[2] Further a much earlier evidence for rice, wheat, *masūra* and *moong* was obtained from Chirand,[3] suggesting the knowledge of these cereals in the region. Can we surmise the use of pulses on the basis of the meagre archaeological evidence and the aforesaid literary references ?

Late Phase

Besides the ones which have already been mentioned in the preceding periods, the beginning of the Christian era brought to light many new stone appliances like pounders, Pounder cum pestles, and saddle and legged querns. The introduction of first two along with the earlier specimens helped these people possibly in two ways, *i.e.*, Chaffing the grains as well as getting flour for the bread, while the last named indicates a change in the dietary habit. As the legged quern is too small in size, it could not have been used for corn grinding. According to Deo and Banerjee[4] also "this truely handy specimen certainly suggests some difference in food habit. Thus while it is very fitting for grinding spices it is too small to make paste of rice and pulses." If the above view is taken into consideration, it can be surmised that the use of spices began at this place from the late phase of this period. It is noteworthy that the contemporary literary evidence[5] also confirms the use of spices.

Most important to note in this regard is the study of the pottery forms which reveal all the modes of cooking, *viz.*, boiling or regular cooking, frying and baking. The first mode of cooking is attested to by the presence of the carinated *hāṇḍī*, while the second and the third, respectively, by the occurrence of frying and baking pans. The vessels for the first two mode of cooking were known earlier, but the specific utensil for the last was introduced only during this phase.

On the basis of the above evidence, we may infer the following points regarding the dietary habits of the people of the entire period, which roughly covers a span of five centuries.

(a) The stone appliances like pounder or pounder–cum-pestle, presumably used for husking grains like rice, were introduced at this place around 200 B.C., although we have an indirect evidence for rice even from the earliest period. It is not known whether the people also used some other articles for processing the rice, such as a wooden shaft presently known in the region as *mūsala* for the purpose of husking and a winnowing basket presently known as *sūpa*, for separating the chaff

1. Shamasastry, *op. cit.*, p. 128.
2. Misra, G.S.P., *op. cit.*, p. 180.
3. *IAR*, 1971-72, p. 6.
4. Banerjee, K.D., Deo, S.B., 'Stone objects' in Sankalia, H.D., *et al.*, *op. cit.*, (1958), p. 237.
5. Om Prakash, *op. cit.*, p. 146.

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from the grain. Thus, the rice after being husked was cooked in a *hāṇḍī*. This may be further supported by Patañjali's observations,[1] referred to earlier in this chapter.

(b) Wheat now occupied possibly a more important place than in the previous periods. The existence of a number of pestles with saddle querns seems to support this view and further suggests that it was ground into flour which was then perhaps converted into *chapātīs* by baking them in the pan, meant for the purpose (for details, see chapter on utensils).

(c) In addition to rice and bread, the people possibly also prepared some liquid dishes like pulses, as can be inferred by the presence of the ladle.

(d) If the small legged querns are linked with the grinding of spices, it is inferable that these might have been used in curries of various kinds and other preparations. It is noteworthy that Kauṭilya also refers to spices and mentions the precise "quantity of spices and fats required for cooking meat."[2]

(e) The meat eating is clearly attested to by the existence of several animal bone remains, particularly those of the young ones. In a single instance a clear cut mark has also been noticed. The writings of Patañjali[3] and Kauṭilya[4] confirm that meat eating was quite common among the people.

(f) People during the period depended on cow, buffalo and goat for milk and milk products.

Period IV

The succeeding period also did not yield any direct evidence for cereals. The objects, presumably associated with the food habits of the people of this period, are almost similar to those found in the preceding Period III. However, we notice a certain degree of refinement in the making of these objects. It can be thus surmised that the food habits of the people of this period must not have been very dissimilar to those of the preceding age.

II

Kitchen Equipments

During the course of our study, it was realised that a wide variety of objects recovered from the excavation at Rajghat could have been related to the kitchen.

1. Agnihotri, P.D., *op. cit.*, pp. 209-210.
2. Om Prakash, *op. cit.*, p. 97. Charaka also says that "spiced soups are more difficult to digest than unspiced ones." *Ibid.*, p. 155.
3. Agnihotri, P.D., *op. cit.*, p. 222.
4. Shamasastry, *op. cit.*, p. 135.

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The entire material associated with this aspect, can be grouped into three main categories, *viz.*, :

(i) Those objects which were possibly used for husking, chaffing and grinding the corns and other eatables. The objects, which come under this class, are pestles pounder pestles, pounders, querns and other similar objects.

(ii) The objects which were presumably used in cooking, *viz.*, ladle, frying shovels, cooking pots and ovens.

(iii) Various kinds of utensils used for serving, eating, drinking, storing the kitchen goods and other miscellaneous purposes.

Since all the types of vessels, including those used in the kitchen, have been dealt in detail elsewhere in the chapter on utensils, various kinds of pots, referred to in the aforesaid classification, are being just mentioned in this chapter, without discussing them at length. The rest of the items, like pestle, pounder, pounder-pestle, quern, ladle, shovel, oven, *etc.*, are being discussed hereunder item-wise :—

(1) Pestle

Three and two examples of pestles come from the early and the late phases of the period II respectively. The frequency increases in the later levels particularly in the late phase of the Period III roughly ascribable to the Kushāṇa times. In fact, a study of the accompanying chart 3 indicates a sudden increase in the frequency of pestles in the late phase of the Period III. They seem to have continued in the succeeding Period IV, almost in the same frequency.

These pestles are usually made of sandstone, excepting a few specimens, in which the shale has been used instead. They are carefully pecked and dressed to give them desired shapes, according to the nature of the work to be performed by them. In most specimens, work or 'use marks' are visible. The larger specimens, with round rectangular or biconvex sections, are noticed mostly in the late phase of the period III (Pl. XXXV,B,1). Of these, the rectangular variety was introduced only during this phase, while the rest had an earlier beginning. It is important to note in this regard that the pestles with biconvex section had their beginning around C. 600 B. C. at Rajghat and continued to be used upto the end of the 3rd cent. A. D. Apart from this, there is yet another variety of pestles with plano-convex section, which was introduced in the first phase of the Period II and survived for quite a long span of time.

A study of the accompanying chart clearly shows that out of the three types (i), (ii) and (iii) (see chart no. 3), which were introduced towards the beginning of the early phase of the NBP ware culture, the type (i) continued upto the end of the 3rd cent. A.D., the type (ii) upto the period IV, while the last, type (iii) had a short life of two centuries only, disappearing altogether thereafter. Towards the

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CHART 3

Periodwise Distribution of Kitchen Equipments

R A J G H A T

Object Type	Period I	Period II (Early phase	Period II (Late phase	Period III (Early phase	Period III (Late phase	Period IV
1. Pestles						
(i) Plano Convex sections	—	1	1	—	2	—
(ii) Biconvex section	—	1	1	—	3	2
(iii) Cylindrical with rounded section	—	1	—	—	—	—
(iv) Rounded section	—	—	—	1	6	4
(v) Rectangular section	—	—	—	—	4	—
2. Pounders	—	—	—	1	2	1
2A. Pounder Cum pestle	—	—	—	—	1	—
3. Legged quern						
(a) Legs separated from the beginning with the upper smoothed flat surface and under surface convex or rounded.	—	—	—	—	—	1
(b) Partly differentiated short legs with under conical surface	—	—	—	—	—	1

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(c) Similarly as type (a) but were made for double purpose. The upper being used for grinding and the under surface for crushing as indicated by a deliberately formed concavity in the middle	—	—	—	—	1	—
4. Saddle quern						
(a) Rectangular saddle quern	—	—	—	—	1	—
(b) Circular saddle quern (surface)						
5. Rotary quern	—	—	—	—	—	1
6. *Ukhli* (surface)	—	—	—	—	—	—
7. Ladle						
(a) Ladle with a straight handle	—	—	—	—	1	—
(b) Ladle with a vertical handle	—	—	—	1	—	—
8. Shovel	—	—	—	—	—	1
9. KNIVES	1	2	1	—	2	5

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beginning of the 2nd Cent. B.C. another type (iv) was introduced, which gained popularity during the late phase of the period III. Though relatively less popular, it continued also in the succeeding period IV.

The specimens found during the late phase of the Period III and the Period IV are of various sizes and diameters, ranging from small to fairly large variety. Their exact size could not be determined, as a majority of them was broken and only a few specimens were found intact. However, considering their diameter and available size, they are divisible into three main groups, *viz.*, small, medium and large. These are important as they can perhaps help in understanding the nature of various items of eatables and other commodities ground by them. Those which are very small in size, cannot be associated in any way with the grinding of grains. It is more likely that such specimens were used for grinding a very small quantity of material such as spices. Similarly, the medium sized specimens might have been used for grinding some different items of eatables, such as pastes of pulses. The large sized pestles were possibly used for grinding corn. Judging from the occurrence of small sized pestles, it is possible to infer the common use of spices—a feature frequently mentioned in the texts, belonging to the contemporary period.

2. Pounder—Pestle and Pounder

Another important equipment of the kitchen consists of pounder pestles and pounders. These are cylindrical, well dressed, smoothed and occasionally polished, made from locally available sandstone. They vary in size and diameter. It is significant to not that in most specimens the working ends are flat or flattish, with a few exceptions in which convex working ends occur. The use of these as pestles is very clearly indicated by the flattish smooth patches on the longer axis. The pounder needs only one hand for its function and very well fits the hollow of the mortar. But when it is used as a pestle on the upper surface of a quern, it requires both hands to hold the two ends for backward and forward motions. The pounders have 'use marks' on the ends, whereas, pounder-cum-pestles have the same on the longer axis. A careful study of these specimens suggests that they performed the functions of both grinding and pounding. Hence the name pounder-pestle. Apart from this, some items like the present day '*mūsala*' or a wooden pounder and '*sūpa*', a winnowing basket, might have also been used for husking the grain and for separating the chaff from the same respectively. That these objects were known in northern India before the beginning of the Christian era is clearly borne out by their representation in the carvings of Sanchi and Bharhut.[1]

Since the materials used for the *mūsala* and the *sūpa* are perishable in nature, it is difficult to find their evidence in the archaeological excavations. However, the existence of the former may be proved by the presence of an *Okhalī* made of

1. Joshi, N.P., *Life in Ancient Uttarāpatha*, p. 114, fig. 291 and 292.

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sandstone, but unfortunately it was obtained from surface. It is marked with tapering sides and an open mouth and has a smooth well dressed inner surface. Its exterior is, however, undressed, suggesting thereby that it was sunk in the ground upto the mouth. Similar specimens are still widely used in this region for husking or crushing the corns or other commodities either with the help of wooden shafts (*mũsala*) or iron pounders.

(3) **Quern**

The third important item of the kitchen was quern, which was of three types, *viz.*, (i) saddle, (ii) legged and (iii) rotary. They were used for grinding the corns and other commodities. Similar objects have been discussed in detail variously by Sankalia,[1] Banerjee[2] and others.[3]

Out of the three types, the first two were reported for the first time from the levels datable to C. 1st Cent. A.D., while the third variety was introduced in the Period IV, beginning from the 3rd Cent. A.D. According to Sankalia, the querns are ascribable to the 'Maurya-Gupta age.'[4] The Rajghat specimens fall within this date-bracket, though they were introduced at this site somewhat late. However, the occurrence of pestles in the levels of around 600 B.C. would also perhaps presuppose the existence of some kind of querns, since the two are supplementary to each other. The querns of the type (ii) have been reported from an earlier date from the sites like Prakash,[5] Ujjain, Nagda,[6] Nasik,[7] Maheshwar,[8] Nevasa,[9] Nagara,[10] *etc.*

1. Sankalia, H.D., 'Cultural Significance of Saddle Querns', *Journal of the Anthropological Society*, Bombay, New Series IV, No. 1, (1950), pp. 35-39.
2. Banerjee, K.D., 'Querns and Anvils from Narbada Valley', *Bulletin of Deccan College Research Institute*, Poona, Vol. XVIII (Jan., 1957), pp. 8-16.
3. Sankalia, H.D., *et al.*, *op. cit.*, (1960), pp. 477-489.
4. Sankalia, H.D., *et al.*, *op. cit.*, (1958), p. 236.
5. Thapar, B.K., 'Prakash 1955: A Chalcolithic Site in the Tapti Valley,' *A.I.* Nos. 20 and 21, 1964 and 1965, pp. 104-5, fig. 35, 1-3.
   Ten specimens of legged querns are reported; out of which 7 came from the Period II and 3 from the Period III. "The evidence at Prakash, is, in general, consistent with the findings at Tripuri, Maheshwar and Nevasa, where such types of legged querns range between the second century B.C. and the third-fourth century A.D."
6. *Ibid.*, p. 105. At Ujjain and Nagda they are found from the layers ascribable to the 5th century B.C., and continue to be in use upto 10th century A.D.
7. Sankalia, H.D., and Deo, S.B., *op. cit.*, (1955), p. 117, pl. XXVIII, 1. The specimen is interesting as one end is projecting with a view to let any crushed material to fall into dish kept below the projection (Periods IIA and IIB).
8. Sankalia, H.D., *et al.*, *op. cit.*, (1958), pp. 236-37. Four types of legged querns are reported from this place.
9. Sankalia, H.D., *et al.*, *op. cit.*, (1960), p. 473. 7 specimens from the Indo-Roman deposit (Period V) and 6 from Satvahan level were found at this place.
10. Mehta, R.N., *op. cit.*, (1968), p. 123. They are found in the deposits of Periods II and III.

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Saddle Quern

According to Marshall,[1] these are the oldest form of querns in India. They are still widely used and known in the region as *Sil*. Only three specimens, one from the late phase of the Period III, and the other two from the surface, have been found at Rajghat. These are flat pieces of sand stone with the upper and lower surfaces dressed and the sides roughly chiselled to give the desired form. The working surface is pecked either with zigzag or horizontal lines to facilitate quick, easy, and fine grinding. Apart from the usual, rectangular type (pl. XXXIII, B, C), a circular specimen (pl. XXXV, A), with pecked upper side has also been discovered from surface. This specimen is significant for its rare shape.

Legged Quern

The Rajghat specimens are interesting and seem to mark a development over the simple querns. As the name implise, these are rectangular sand stone querns with four legs. These legged specimens can be classified into three groups on a technological and functional basis.

(a) In this type, all the four legs are distinctly separated from each other. The upper flat surface shows a longitudinal smoothed depression as 'use mark'. The under surface is convex and usually well dressed, but occasionally rough dressing is also noticeable in the form of chisel marks. These specimens perhaps served a single purpose of grinding only. The upper working surface is also occasionally pecked, which may possibly be taken as an improvement over the unpecked 'working' surface.

(b) The specimens belonging to this group are distinguished by partly differentiated short legs and the conical under-surface with some chisel marks (pl. XI, B, 1). The flat unpecked upper working surface is marked by a smoothed depression in the middle which may be a result of constant usage. A single specimen represents this group.

(c) Similar in shape to the specimens of the group (a), it shows a technological and functional advancement over the other. The specimen of this group was deliberately made for a double purpose as is indicated by its upper pecked flat surface, which was meant for grinding, and, a longitudinal depression in the middle of the under-surface, which was used for pounding or crushing (pl. XI, B, 2). This signifies its double use as both quern and mortar.

Rotary Quern

The excavation yielded a solitary broken piece of this type from the Period

1. Marshall, *Taxila*, Vol. II, p. 485.

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IV. Specimens of this variety have been reported from some other places like Nagara[1] and Nevasa,[2] and have been discussed in detail in the report of the latter site.

So far we have dicussed the objects which were perhaps used either for husking, grinding or chaffing the grain. We now divert the attention towards those kitchen equipments, which were utilized in the process of cooking. They include ladles, frying shovels and ovens, which we propose to discuss in the following pages.

(i) *Ladle*

They are represented by three specimens and fall into two groups:

(i) Ladle with vertical handle (pl. XXVI, A, 4).

(ii) Ladles with straight horizontal handle (pl. XXVI, A, 9).

Some ladles have been reported also from Nasik[3] (Period IIA), Taxila[4] (1st C. A.D), Rairh[5] and Nevasa.[6] Their earliest occurrence at Rajghat is said to be in the early phase of the Period III.

Though the specimens of both the groups appeared for the first time at this place in the Period III, the specimen belonging to the group (i) had slight earlier beginning. In some cases, the use of the first type (*i.e.*, ladle with vertical handle) has been suggested as that of a lamp, particularly with reference to the sites of the Deccan area. This suggestion is based upon the presence of wick-projections, which the ladles of the Deccan invariably possess. Since the Rajghat specimen has no such device, its use, therefore, as ladle is not in doubt. Identical specimens with vertical handles are still in existence and used mostly for taking out liquid substance like *ghee* or oil. The specimen under study shows some resemblance with the Nasik, Nevasa and Taxila examples, recovered from similar datable contexts.

The specimens belonging to the group (ii) have a deep ladle-bowl, the outer diameter of one of them being 7.5 *cm*. They are datable to the beginning of the Christian era and compare well with those recovered from Nevasa.

Frying Shovel

A solitary specimen of frying shovel (pl. XXXIV, B, 1) is a significant

1. Mehta, R.N., *op. cit.*, (1968), p. 125, fig. 59, 10.
2. Sankalia, H.D., *et al.*, *op. cit.*, (1960), pp. 477-89.
3. Sankalia, H.D., and Deo, S.B., *op.cit.*, (1955), p. 114, fig. 52, 13.
4. Marshall, *Taxila*, Vol. II, p. 542, 24.
5. Puri, K.N., *Excavations at Rairh*, pl. XX.
6. Sankalia, H.D., *et al* , *op. cit.*, (1960), p. 431, fig. 189, 2-4.

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discovery of the Period IV. It is heavily rusted and is more or less identical with the modern form, which is locally known as '*paunā*'.

Oven : The best evidence representing a kitchen complex with an oven is found from the layers assignable to the Period IV. It is almost identical with the modern oven and was constructed by placing bricks in two rows leaving the intervening space for fuel. It is located roughly in the middle, close to the wall 84 A, on the eastern side. The position of the oven is somewhat inconvenient for the person who was required to do cooking at the place. But this might have been done with a view to utilizing the rest of the space of the room for some other purpose. The adjacent structure no. 85 appears to be a "small platform of bricks for keeping articles of daily use in the kitchen."[1] A storage vessel placed in the vicinity of the oven was found associated with this complex and it might have been used either for keeping water or the articles of daily use in the kitchen. All these tend to point out that the kitchen was carefully planned.

A somewhat similar kitchen complex also occurred in the late phase of the Period III, in which the shape of the oven is almost the same as noted in the previous one. The difference noticed between the two lies in their modes of construction. The former is made of several courses of bricks placed in the usual manner, while the latter was made by only three bricks, placed in an upright position (fig. 7). In doing so, a portion of these bricks was burried in the floor to avoid displacement. The points of similarity between the two are that the opening of both the ovens is roughly towards the north and both are located against a wall. In the case of the structure of the Period III, the size of the room is very small suggesting thereby its exclusive use as a kitchen.

On the basis of the above study the following observations emerge. The earliest known inhabitants consumed rice, as paddy husk impressions have been noticed on pot sherds. Separation of husk from corn would presuppose the existence of stone appliances like pestles and querns, although the excavation did not yield any such object. The cereal diet was perhaps supplemented by animal flesh. The occurrence of bone points and arrow head indirectly supports the practice of hunting.

The presence of wheat or barley in the NBP Culture is indicated by the existence of pestles. Thus, it can be surmised that wheat or barley and rice might have been the staple diet of the inhabitants of this place from the Period II onwards. The animal remains suggest that a large section of the society was meat eating. Their food comprised fish, fresh water mussels, turtles, cattle pig, goat, *etc.* If the literary acocunt of the period[2] is to be relied upon, the people of this age

1. Narain and Roy, *op. cit.*, (1976), p. 61, pl. XIII.
2. Misra, G.S.P., *op. cit* , p. 179. The word *Mānsodanam* suggests that the rice was cooked in combination with the meat pieces. (cf., modern *Biriyānī*).

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were also taking rice in combination with meat. Besides this, it can also be surmised that people took rice and fish and the rice might have been taken with milk and similar other eatables.

Among the domesticated animals, cattle, pig, buffalo and goat are important. They were domesticated for their meat as well as for milk and milk products. The emergence of the impervious wares, particularly the NBP, is probable indication of the use of milk products, like *ghee* or any other fatty ingredients, which were presumably kept in these vessels. This is somewhat corroborated by the literary evidence, as some of the preparations referred to by Pāṇini like *Apūpa* and *Chūrṇa*, *etc.*, were prepared with *ghee* according to Agrawala.[1]

No specific vessel for any specific mode of cooking was yet invented by the people. They were using small to medium sized pots and a few dishes of the red ware for the purpose of cooking, as indicated by their burnt exterior. The deeper vessels were used perhaps for the boiling purposes and the dishes for frying, the high sides of the latter helping in the process. If this hypothesis is correct, we may suggest that the frying was known to the people of this place from the early phase of the NBP ware culture. It was only towards the beginning of the late phase (C. 400 B.C.—200 B.C.) of this culture that the people started using a specific pot like *Kaṛāhī* for frying purposes. But, it should be stated that the old practice of using dish as a frying pan did persist for some more time. The literary evidence too seems to support an early date for the beginning of the practice of frying.[2]

No trace of any oven was recovered from the Period II, but this absence at this site could be coincidental, since the existence of ovens at some neighbouring contemporary sites, like Sonepur and Vaiśālī, has been noticed.

When we come to the late phase of the NBP Ware Culture, we notice that consumption of meat had markedly declined, indicating thereby a shift in the food habit. This would coincide roughly with the period of Aśoka's rule. Was this shift the result of much proclaimed desire of the sovereign to refrain from killing animals ? Surely, Varanasi, placed so near to Sarnath, must have come in for

1. Agrawala, V.S., *Pāṇinikālīna Bhāratavarṣa*, pp. 121 and 124.
2. Some scholars are of the opinion that frying was introduced in India by the muslims. However, the early Jain Canonical works, which in their present form were compiled in the Fifth Century A.D., assign a separate name for all the fried articles and call them *Supākvam*. Suśruta (fourth Cent. A.D.) calls articles, fried in classified butter or oil, *ghrita, taila pakvāḥ* and mentions many sweets prepared by frying. Jataka (1st Cent. A.D.) in his medical treaties calls fried articles *Snehasiddhāḥ*. Pāṇini mentions two sweet preparations *Apūpa* and *Samyāva*, which imply a full acquaintance with the process of frying. In view of the above evidence, there seems no justification for holding the view that the process of frying was introduced into India by the Muslims.
Om Prakash, *op. cit.*, Appendix 1, "History of Frying in Ancient India," pp. 249-250.

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close surveillance on the part of the *Dhamma Mahāmātras*, appointed by the ruler.

The milk and its products seem to have occupied an important place in the food of the people of the Period II, as suggested by the presence of a large number of skeletal remains of the milch-animals. The increasing variety and number of kitchen equipments like querns, ovens, ladles, *etc.*, may also perhaps indicate a gradual change in the food habits. The changed noticed in the food habits of the people of the succeeding Period III may be due to the impact of foreign elements in the local population.

A few evidence of the Period IV are important and deserve particular mention. It is during this period that we notice the occurrence of terracotta female figurines of milk maids, suggesting thereby the emergence of this professional class. It was certainly as a result of the increased consumption and demand of milk and milk products. The food habits and the equipments, associated with the preparation of the food, remained much the same as in the preceding period. It is possible to conclude that there was a certain degree of refinement in food habits and consequent improvement in the kitchen equipments. The introduction of rotary quern capable of grinding fine flour in the period is an instance to be taken note of.

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9

Economic Life

The economy of any place depends largely on its natural resources and also on the technological skill of the people inhabiting it. Thus, the position of the various crafts and industries of ancient Varanasi was influenced by those physical factors and natural resources to which we have already referred in the Introductory Chapter. The detailed analysis of the excavated material of Rajghat has amply demonstrated that all these were exploited from time to time by the ancient inhabitants of Varanasi. In this they were aided by their own knowledge and skill as well as by the skill acquired as a result of contacts with other contemporary people, in the Gangetic valley and outside. The location of the city of Varanasi also contributed to the development of industries and trade. Its situation on a comparatively high and stable bank of the river Ganga was clearly of great advantage.

In the present chapter, an attempt has been made to study such aspects of economic life as agriculture, animal husbandry and other means of subsistence, various crafts, industries and professions, *etc.*, and the picture reconstructed has been arranged in the chronological sequence of the Period I to the Period IV. Some aspects, as economic organisation, media of transaction, means of transport and trade have been selected for independent treatment in view of their special significance for the present discussion and also to give a better connected account, although, here again, under each head, the treatment is chronological and periodwise.

At the outset, however, some preliminary remarks are essential by way of caution. Archaeological material having a direct bearing on economic life is meagre, and we have often had to take recourse to direct inferences. It must be added that quite a few ancient objects which have also a bearing on economic life, and have been utilized here, have been discussed in detail in the preceding chapters, though, of course, care has been taken to avoid unnecessary repetitions. Further, wherever, possible, inferences have been drawn also on the basis of statistical data, since they may be considered of value for reconstruction of economic life. But it is necessary to keep in mind also the limitations of these types of arguments in our

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case. They are such as the excavation of only part of the mound; unequal area of the trenches belonging to different periods, the area generally narrowing as the excavators dug deeper; and the very disturbed nature of the site in many trenches—upper levels, up to and including the Gupta period, often completely disturbed. The excavation reports also, generally speaking, cannot always be considered as wholly suited for inferences of statistical nature, for the obvious reasons that often they do not include the needed statistical information. Lastly, it may be noted that the picture of economic life based wholly or largely on archaeological evidence is far from complete. There is a good number of crafts and industries which are attested to in literature, but have no archaeological evidence in support.

Period I

Agriculture and Animal Husbandry

The economy of these early settlers seems to have been dominated by agriculture and animal husbandry. It is indicated by the presence of paddy husk impressions on the pottery, the large sized storage pots and the presence of the remains of the cattle, pig, buffalo and sheep. The animal bones, as above in fact appear in fairly large numbers, and there is a probability that these people were essentially pastoral and had only recently taken to agriculture.

Hunting and Fishing

The occurrence of bone arrow heads, including the barbed one with tanged and socketed variety (see pl. XXVII, B, 6) may suggest hunting. Besides, stone sling-balls have been recovered from the layers of this period and they too are usually associated with hunting. The presence of both these types of objects might indicate that there existed a class of hunters amongst these early settlers, who sought their livelihood by killing animals by means of bow and arrow, sling-balls or by entrapping. No fish bones have been recovered from these levels; and, in fact, direct or indirect evidence of fishing does not appear before the Period II, but the proximity of the rivers Ganga and Varuṇā suggests that even at this early period, fishing was probably already a recognised means of livelihood.

Crafts and Industries

Pottery Making

The richest yield of the period is its pottery, and its frequency suggests the existence of a certain professional class engaged in the manufacture of it. Their proficiency in the craft can be judged by the fact that they produced vessels by employing three different methods of firing, *viz.*, open kiln, closed kiln and inverted

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firing.[1] In addition to earthen vessels, the potter craftsmen produced other objects as well, like children's toys, personal ornaments (ear ornaments, beads), toilet accessories (skin rubbers), *etc.*

Smithy

Iron had already entered the economy of this period, and the occurrence of slags[2] and some finished objects like nail, blade fragment (?) and a few fragmentary objects of an indeterminate use suggests that the metal was locally smelted and the blacksmith's craft was in demand.

Textile

The recovery of spindle whorls[3] and 19 pottery discs with single perforation[4] from this period suggests spinning and weaving, and, therefore, by implication the existence of a cottage industry in textile.

Manufacture of Bone Tools

The making of bone tools also seems to have been a means of livelihood, since one of the ten tools discovered from the layers of the period is an unfinished specimen, which suggests local manufacture of the tools.

Period II (Early and Late Phase)

Agriculture

The emergency of implements like axe and sickle (pl. XXXIV, B, 3) during this period gave further impetus to the growth of agriculture; the axe helped in clearing the forests to prepare arable land and the sickle was used for harvesting. We may infer on their basis not only the growth of agriculture on a relatively more extensive scale, but also the cultivation of a wide variety of crops. The alluvial plains around the ancient city must also have been very favourable for this growth. We have, besides rice, indirect archaeological evidence only for the cultivation of wheat or barley.[5] But several other types of crops are also likely to have been cultivated,

1. For details about the pottery of this period see the chapter on 'Utensils'.
2. Bhardwaj, H.C., *Aspects of Ancient Indian Technology*, Varanasi, (1979), p. 144, see also appended chart 4 of this chapter.
3. *IAR*, 1967-68, p. 49.
4. Such perforated pottery discs have been found at a number of sites, in the Gangetic valley and outside. In South India, they are reported from Brahmagiri (*Ancient India*, no. 4, p. 269). The alternative suggestion of the excavators of the present site that these pottery discs with single perforations may also have been used as 'toy pieces' does not appear very convincing to us. Narain and Singh, *op. cit.*, (1977), p. 59.
5. See the chapter on 'Food Habits, *etc.*'

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such as sugar cane, and variety of vegetables and fruits, and as suggested by the Buddhist literature, commercial crops like cotton.[1] There is no direct archaeological evidence for irrigation, but the above development could not have been possible without this facility. The Buddhist literature, it is interesting to note, contains numerous references to digging of canals, tanks and channels.[2]

Animal Husbandry

Cattle-rearing was also no less important than farming. The agricultural population had to depend on them at all times for various purposes like cultivation, transport, irrigation and for dairy products. But, for some cattle-keeping was the sole profession.[3] The *Aṅguttara Nikāya*[4] mentions *gorakkha* as a means of livelihood, and the *Arthaśāstra* of Kauṭilya[5] also contains valuable information in this connection. The faunal remains of the period suggest the practice of animal husbandry on a substantial scale, and this is also borne out by the evidence of terracotta figurines which show a variety of representations of animal forms, specially of the domesticated types. According to a reference in the *Mahāvastu*, the ancient Kingdom of Kāśī was rich in cattle.[6]

On the basis of their use the animals can be grouped into two: (i) those reared for dairy products and for meat eating; and (ii) those reared for the purposes of transport and irrigation. Cattle, buffalo, sheep and goat come under the first group, while bullocks, horses, elephants, camels and mules form the second group. We have already seen in the preceding chapter that the dairy products formed one of the important item of food. The cow dung also might have been used for manure, fuel as well as for plastering the walls. Of the animals belonging to the second group, the bullocks must be considered of great importance, as it was employed variously in operations connected with cultivation, irrigation and transport. The elephants, horses, camels and donkeys were used for carrying loads and as a means of conveyance, *etc.*

In comparison to the Period I, we have evidence for a larger number of crafts, industries and professions in this period. They are as follows:

1. For literary reference see chapter on 'Dress'.
2. See Cowell, Jātaka No. 31. We are also informed by an other Jātaka that the distribution of water from the dam across the river Rohiṇi was the cause of struggle between Śākiya and Koliya tribes. Cowell, Jātaka No. 536.
3. See Bose, A.N., *Social and Rural Economy of Northern India*, Vol. 1, p. 93.
4. *Aṅguttara Nikāya*, IV, 281, 286.
5. Shamasastry, *op. cit.*, pp. 142-146.
   It has been suggested that the organisation of dairy forms was a special contribution of the Mauryan administration; see Singh, M.M., *Life in Northern India in Pre-Mauryan Times*, p. 206.
6. As cited in Kher, N.N., *Agrarian and Fiscal Economy in the Mauryan and Post Mauryan Age*, (1973), p. 224.

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Hunting, Butchery and Fishing

There are direct or indirect evidence of hunting, butchery and fishing during the period, indicating the involvement of a class of people earning their livelihood through them. As far as hunting is concerned, the available remains of wild animal species are small, but antelope and deer seem more common. Their frequent representation on the terracotta discs of the period also supports this. The same devices for killing these animals were adopted as in the preceding period, but now the weapons had improved and were more effective, as they were being made of iron. However, for killing birds, bone points and arrow heads were still used. They are found in fairly good numbers and are of four different types. Considering their small size, their use for killing bigger animals is most unlikely. A specimen of a bone-arrowhead found at Ujjain is actually stained with the blood of a bird.[1]

It has been noted in the preceding chapter that a good number of bone remains of eatable domesticated animals, like cattle, pig, sheep and goat, belonging to this period, were found bearing cut marks, suggesting that they were slaughtered. The wild animals like antelope and deer must also have been hunted for food and their flesh sold regularly.

Fish and remains of other aquatic animals like turtle and *lamellidens marginalis* (fresh water mussel) have also been found at this place, and fishing may be safely inferred as an important means of livelihood. They probably used nets for fishing, and, in our opinion, some of the large sized so-called terracotta beads[2] belonging to this period might have been used as netsinkers. The Buddhist literature also refers to the use of nets for fishing.[3] However, as in the present day practice of fishing, the use of basket traps also cannot be ruled out.

Hunting and slaughtering animals for food, fishing, *etc.*, directly indicate the practice of eating meat, and, in the preceding chapter also, we have seen that meat-eating seems to have widely prevalent during the early phase of this period. All this suggests the existence of respective professional classes, of hunters, butchers and meat-sellers, bird-catchers, fishermen, *etc.*, and the contemporary literature supplies ample corroborative evidence. The Buddhist literature contains clear reference to the practice of meat-eating and regular meat-shops of ancient Varanasi.[4] The various terms used in this literature for hunters suggest that hunting was a very specialized occupation and hunters were differentiated according to the

1. Banerjee, N.R., *The Iron Age in India*, Delhi, (1965), p. 203.
2. Narain, A.K., Singh, P., *Excavations at Rajghat*, Pt. III, Small finds, Varanasi (1977), pp. 46 ff.
3. Fausböll, Vol. I, p. 427, 482.
4. See Cowell, Jātaka, no. 481; the story of Suppiya in *Mahāvagga*, VI. 23, 2. also Om Prakash, *op. cit.*, pp. 63-64.

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animals and birds they used to catch and kill.[1] According to one interesting reference, two villages of hunters (*nesādagāma*) existed near Varanasi, on the two sides of the river Ganga, and five hundred families dwelt in each of them under a chief.[2] The fishermen are referred to as Kevaṭas in the Buddhist texts,[3] a word still in use for them in parts of north India.

It must be noted that in the late phase of this period, we notice a decline in the popularity of meat-eating, suggesting thereby a corresponding decline in the related occupations. It is difficult to explain this phenomenon satisfactorily. It could be related to the growth of agriculture and relatively greater consumption of cereals. But a better explanation would be to understand it as a pointer to the growing vegetarianism under the influence of the Buddhist and Jain religions.[4]

Pottery

The potter craftsmen of this period show decidedly greater skill and efficiency in their art than the earlier ones. While all the types of wares of the preceding period continued to be produced with considerable improvement, this period is marked by the introduction of the distinguished ceramic industry popularly known as the Northern Black Polished Ware. The fact that this ware is found in such large numbers, was produced in three different grades, and had achieved remarkable technical and aesthetic perfections[5] suggests that the industry was in an unusually flourishing state and was not only producing articles for widespread local consumption, but also quality products for export to other centres. That the NBP ware was a prized commodity, is borne out by the occurrence of rivetted specimens at other places, and the flourishing state of the potters industry is confirmed by the Buddhist literature,[6] which speaks of the existence of a separate suburban village of potters near Varanasi. We have also the literary evidence that a potter from Varanasi loaded his earthen vessels on a donkey, carried them from city to city to sell them and the dealer reached as far as Taxila.[7] Although the statement occurs in the commentary on the *Dhammapada*, it may be understood as applicable to the early Buddhist period, and, therefore, there is a strong probability that the reference is to the NBP ware. The NBP ware with its fine quality would have been an obvious choice for being sold even in cities as distant as Taxila.

1. See Bose, A.N., *Social and Rural Economy of Northern India*, Vol. I, p. 97, and Singh, M.M., *op. cit.*, p. 230.
2. Cowell, Jātaka, no. 540, also Fausböll, Vol. VI, p. 71.
3. Fausböll, Vol. II, pp. 423-426.
4. Cf. Basham, A.L., *The Wonder That was India*, London, (1961), p. 213.
5. For details see Chapter on 'Utensils'.
6. Cowell, Jataka, No. 408.
7. *Dhammapada Aṭṭhakathā*, III, 224, as cited in Motichandra, *Trade and Trade Routes in Ancient India*, p. 57.

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The late phase of this period, however, witnessed some degeneration in the potter's crafts, as suggested by the appearance of the coarser variety in the NBP and the associated wares, although the finer specimens are also not wanting. The high skill achieved by the craftsman of the early phase seems to have been slowly dying. He was now manufacturing mostly utilitarian shapes.

Clay Modelling

The demand for clay figurines was still not very marked during this period, and it seems that the potter-craftsmen manufactured terracotta figurines also. This is suggested by the recovery of a group of grey animal figurines which bears close similarity with the black slipped, NBP and grey wares in several technical details including surface dressing.[1] It is further supported by references in Buddhist literature to potters manufacturing various kinds of figurines and selling them in the market.[2]

Textile, Dying and Embroidery

As in the Period I, spindle whorls and terracotta discs with single perforation are also reported from this Period,[3] thus suggesting the existence of a textile industry. But there is no other archaeological evidence. However, as we have already seen,[4] the Buddhist literature contains a number of references to the special excellence of Kāśī or Varanasi clothes, and it is evident that by this time Varanasi had attained eminence as a centre of textile industry, producing a variety of clothes of cotton, muslin, silk, linen and woolens, *etc.* On the same evidence, dying and embroidery also seem to have been among related important occupations.

Smithy

There is impressive archaeological evidence and adequate literary corroboration for the existence of metal industry, especially iron industry during this period. In fact, the word *Kammāra* occurring frequently in the Buddhist literature is usually

1. Pratap, Birendra., 'A Technological Study of Terracotta Figurines in India Before the Emergence of the Mould' *The Journal of the Oriental Institute.*, Vol. no. XXII, no 3, p. 390; also by the same author, 'A Study of Grey Terracotta Figurines from Rajghat, Prahladpur, Sarai Mohana and Masaon', *Bhāratī, BDAIHCA*, New series no. 1, pp. 141-144.
2. *Majjhima Nikāya*, I, 38.3.13, II, 6.0.20, also Jātaka, Vol. VI, p. 12, as cited in Trivedi, Krishna Kant, *Prāchīna Pāli Sāhitya se Gyāta Sanskriti kā Eka Adhyayana*, (unpublished Ph.D. Thesis, 1979), pp. 402-3.
3. Narain and Singh, *op. cit.*, (1977), p. 58.
4. See Chapter IV, on 'Dress'.

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understood by the modern scholars[1] as referring to a blacksmith, and it is clear that he occupied an important position among artisans. Of all the metals iron was the most useful in everyday life. According to the available evidence, the industry had its start from the very beginning of the settlement at this place, but it gained favour and popularity with the succeeding NBP Ware Culture, which records marked development in the technique of smelting and forging the metal. A sudden rise in the frequency of iron objects, lumps of iron ores and slags (see the appended chart 4) indicates that' the blacksmith's industry was in a flourishing condition during the period, a fact which may be further corroborated by the mention in the Buddhist texts of the existence of blacksmith's village (*Kammāragāma*) near Varanasi, consisting of one thousand families organised under a head (Jeṭṭhaka).[2]

Among the noteworthy iron—objects are the agricultural implements like sickles and an axe (see pl. XXXIV, B, 3) recovered from an early level of this period. Their occurrence at such an early period is significant, though sickles are reported from a corresponding level also at Prakash.[3] Among the tools of craftsman mention may be made of carpenter's chisels, which are tanged as a rule, and mason's or smith's chisel[4] (see pl. XXVI, B, 5-8). The weapons comprise arrows and spearheads (see pl. XXXIV, A). Of these, the former is of two types, *viz.*, tanged and socketed,[5] their available length ranged from 5.05 *cm.* to 12.55 *cm.* Of special interest are barbed and socketed arrowheads (pl. XXXIV, A, 4), an object having pointed ends at both ends (pl. XXXIV, A, 10), similar in shape to the bone point and leaf shaped arrowhead with a mid rib (pl. XXXIV, A, 4), comparable specimens of the last two varieties are found respectively from *Kauśāmbī*,[6] Nasik and

1. Mrs. Rhys Davids (see Bandyopadhyaya, Narayan Chandra, *Economic Life and Progress in Ancient India*, Cal. 1945, p. 243) pleads that the word *Kammāra* is a general term which may mean a craftsman in any metal. But Mehta (*Pre-Buddhist India*, Bombay, 1939, p. 198). Bose (*Social and Rural Economy of Northern India*, Vol. I, pp. 237-38) and Adhya (*Early Indian Economics*, p. 48), feel that the smith's trade was divided and specialised on the basis of different metals, and the word '*Kammāra*' has a pointed reference to the blacksmith or iron smith. We get a list of workers in the *Miliñdapañha* in gold, silver, lead, tin and iron, all working separately.
2. Cowell, Jātaka no. 387; also Fausböll, Vol. III, p. 281.
3. Thapar, B.K., 'Prakash 1955: A Chalcolithic Site in the Tapti Valley' *AI* nos. 20 and 21, fig. 41, 15.
4. The largest number of chisels has so far been discovered at Rajghat. Its occurrence in the early phase of this period is significant as out of five, four are carpenters chisel and one specimen is smiths or masons chisel.
5. The socketed arrowheads are known at this place roughly from C. 6th—5th Cent. B.C. and onwards and are noticed in the south at the megalithic sites. Thus, they have a wide circulation both in time and space. Besides, they are considered as earlier than those with tangs. At Rajghat both the types have been found from the Period II.
6. Sharma, G.R., *Excavations at Kausambi*, 1957-59, pl. 39, 17, III, 10, dated Circa 535 B.C.—465 B.C.

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Jorwe.[1] The other miscellaneous object include knives, rings, nails, handle pieces blade fragments and indeterminate, highly corroded specimens of different uses.

Some of the finished iron objects and slags belonging to this period have been analysed scientifically and considerable technical information obtained.[2] It is now known that no meteoric iron was used at this place, and the iron of Rajghat is slag bearing wrought iron which could be forged and welded. It is a fairly good quality iron, with a high degree of purity, and the only impurities are those contained in the slag. In all probability, the source of this iron was the rich iron-belt of Bihar and Orissa (Singhbhum and Mayurbhanj), although a suggestion has been made that the Mirzapur mines also could have been exploited for the purpose.[3] There is no evidence of steel-making here, but carburization was practised for hardening, and is good evidence for technological advancement and developed state of the industry.

It is clear from the above how superior tools and implements of iron of various types and for different purposes were manufactured here during the period, and how they must have helped the growth of agriculture and all kinds of crafts and industries. Iron weapons like arrow-and spear-heads must have been in demand not only for needs of hunting but also for use in war. In fact, by this time, the iron products themselves had become an important item of trade,[4] although we are not in a position to produce specific evidence of such trade from Varanasi.

Coppersmith

After iron, copper was the most useful metal during the period. The scientific analyses of Rajghat objects show that this metal was obtained from copper ores from Bihar (Mosaboni and Rakha).[5] The unalloyed copper was in general use and had a high purity (around 98.4%). However, copper-tin alloying was also made in a few cases but full advantage of alloying was not realized.[6] The study also revealed that most of these copper objects were made either by direct casting or

1. Sankalia, H.D., and Deo, S.B., *Report on the Excavations at Nasik and Jorwe*, fig. 52, 2.
2. See Bhardwaj, H.C., *Aspects of Ancient Indian Technology*, esp. pp. 144-156. The information presented here is based on the findings in this work.
3. See Kosambi, D.D., *The Culture and Civilization of Ancient India, in Historical Outline*, London, (1965), p. 115.
4. See Sharma, Ram Sharan, *Light on Early Indian Society and Economy*, Bombay, (1966), p. 60; and by the same author, *Perspectives in Social and Economic History of Early India*, New Delhi, (1983), pp. 131 ff.
5. Bhardwaj, H.C., *op. cit.*, (1979), p. 97. see also Agrawal, D.P., *The Copper Bronze Age in India*, New Delhi, (1971), pp. 106-107, where the author even suggests that the people settling in Rajghat probably came from Bihar.
6. Bhardwaj, H C., *op. cit.*, (1979), pp. 80, 170; also by the same author, 'Rajghat Copper—A Metallurgical View,' *Purātattva, BIAS*, no. 2, pp. 30, and 34.

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forging. The copper smith was aware of the beneficial effects of annealing; some objects were forged by alternately annealing and cold-working.[1]

The presence of copper ore and terracotta crucibles (pl. IV, A) from this period suggests that the metal was melted in these pots, presumably for casting small objects like beads and rings, *etc.* These crucibles have become vitrified and enameled on the outer side, indicating that they were heated to high temperature. That these were used for melting purpose is evident from the presence of green accretion still sticking on the inner walls.

Copper was employed for manufacturing a variety of objects, like vessels, animony rods, bangles, finger rings, borers, blades, rods, wires, nails, and also copper currency, *etc.* (see fig. 26, 2, 3, 7, also pls. XXXI, XXXIII, A). The vessels comprised mainly bowls of varying sizes and shapes. Their production in this metal is an important introduction of the period. Numerous excavations conducted at other places in this region also confirm that they were popular products of the period in this metal.

Bone Industry

Bone industry seems to have been another important element of the economic life. Its easy availability and workability made the industry living. The craftsmen working on bone were manufacturing primarily various types of tools or 'bone-points' (see pl. XXVII, B, 3, 9, 11), but other objects, like dice, comb (pl. XXXII A, 5) and disc, *etc.*, were also made.

The bone points are a characteristic feature of the Gangetic valley, and are an essential feature of the NBP Ware Culture in the region, though their association with other early cultures are also known in central India, Deccan and North India.

The total number of the bone tools recovered from Rajghat during the period (both phases) is fifty, and they are of four different types, *viz.*,

(a) double-ended points;
(b) tanged specimens (showing two manufacturing processes);
(c) socketed points; and
(d) socketed and barbed.

Leaving the type (a) (the use of which is uncertain),[2] the specimens belonging to

1. Bhardwaj, *op. cit.*, (1979), p. 170.
2. Although these double-ended bone-points have been generally understood as hunting tools and called arrow-heads, they have also been variously explained as styluses, awls, gouges, combteeth, gorges, bobins, shuttles, *etc.*, see Deva Krishna and Mishra Vijayakanta, *op. cit.*, (1961), p. 60, Sankalia, H.D., *et al.*, *op. cit.*, (1958), p. 222 also Narain and Roy, *op. cit.*, (1968), p. 42.

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the remaining types in all likelihood were hunting instruments, for shooting birds *etc.* A closer study of the specimens of these four types also clearly reveals different processes of manufacture; an important difference being that while some specimens are roughly fashioned and have been prepared by the simple process of flaking, others have superior finish and show signs of polishing. Besides, quite a few unfinished specimens have also been found in the entire collection of this period. All this testifies to the existence of a flourishing local bone industry in which a certain professional class was engaged in manufacturing objects of various use.

Carpentry

Another important and indispensable craftsman of the period was the Carpenter. Much light is thrown by the Buddhist literature on the achievement of his craft in general and in particular in respect to Varanasi. The Jātakas[1] mention a Carpenter's village (Vaḍḍhakigāma) near Varanasi, containing a thousand families. It further provides an interesting description of the works of these carpenters engaged in the house-building and manufacturing household articles like chair and bed, *etc.* It may be stated at the outset that the excavations at Rajghat have not unearthed any actual specimens of the carpenters art, which is not unnatural, wood being a perishable material. But the occurrence of Carpenter's chisels, the laying of the wooden planks along the course of the Ganga and the existence of post holes found here and there for constructing houses clearly point towards the activities of the carpenters.

Stone-Working

The occurrence of stone balls, pestles, bowls, sharpener, disc, point, lid and designer, (see pls. XXVII, A, 2, XXXII, C) variously made of sandstone, soap stone, opal and shale, suggest the existence of a certain professional class or classes of stone masons. Here again, we have literary corroboration from the Jātaka stories which mentions stone cutters and experts in shaping stones in Varanasi.[2]

Ivory Industry

According to the Buddhist literature, ivory industry was quite flourishing in Varanasi and ivory-workers had a prosperous trade at this place. This industry was located in a particular portion of the city, which was known as the '*dantakāra-vīthi*'[3] (the ivory-workers street). Unfortunately, not many archaeological antiquities have been discovered to confirm this information. But the skill of the

1. Cowell, Jātaka nos. 156 and 466.
2. Cowell, Jātaka no. 137.
3. Fausböll, Vol. I, p. 320, also Vol. II, p. 197.

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ivory workers of Varanasi is testified by the recovery of dice and a bead, the former belonging to the early phase and the latter to the succeeding phase of this period. The dice is a complete specimen, oblong in shape and square in section, measuring 6.09 *cm.* It is found with count marks from one to four, and the counts are indicated by incised concentric circles on each side. The bead is of standard truncated bicone shape.[1]

With this industry must be associated also a certain professional class whose business it was to supply elephant's tusks to the ivory-workers. Interestingly, a Jātaka tale refers to a person in Varanasi selling elephant's tusk and thereby earning his livelihood.[2] Nepal might have been the nearest source for them.

Bead Making

The bead-making industry makes its beginning from this period. It may be stated at the outset that we have included only stone beads (*i.e.*, beads in precious, semiprecious and ordinary stones) under this head, and this mainly due to the reason that they were manufactured presumably by specialized class of craftsmen. The beads in other materials, were in all probability manufactured by the craftsmen working in those materials and they also imply different modes of manufacture. We have noticed the local smelting of copper and there is similar evidence of glass making.[3] Presence of beads in these materials, therefore, obviously suggests their local origin. Likewise beads of bone, ivory and terracotta also might have been manufactured by the craftsmen working respectively in bone, ivory and pottery, especially as independent local industries of these materials were already in existence. It may, however, be mentioned that beads in some of the materials were not locally manufactured. Mention in this regard may be made of lapis beads which was obviously imported from outside. Similarly, coral beads also might have been brought to this place probably from the bay of Bengal where it is available.

As regards the beads of precious and semi-precious stones, those of agate and carnelian have been found in comparatively substantial numbers. This in itself may suggest the local origin of the beads. But it is confirmed by the occurrence of seven unfinished beads of agate, showing different stages of manufacture, and one unperforated carnelian bead[4] (see pl. XXXVI).

Etching was also known to the craftsmen and has been done either by spotting (spherical beads) or by executing zonal bands[5] (barrel circular bead).

1. Narain and Singh, *op. cit.*, (1977), p. 43.
2. Cowell, Jātaka no. 221.
3. See discussion of glass industry, below.
4. Narain and Singh, *op. cit.*, (1977), pp. 22 and 27.
5. Narain and Singh, *op. cit.*, (1977), pp. 26-27, pl. III, no. 8.

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Beads in other materials, such as Chalcedony, topaz, crystal and jasper, also might have been locally manufactured as the source of raw material for these are also the same. It is obvious from the above evidence that Varanasi was one of the important bead-manufacturing centres in the Gangetic valley during this period.

Cosmetics and Perfumery

The descriptions in the Buddhist texts indicate the fondness of the people for cosmetics and perfumery, and there is also some archaeological corroboration for it.[1] In the discussion of cosmetics earlier, the discovery of a shale designer (see pl. XXXII, C) and a soap-stone casket lid from this period has already been mentioned, the former apparently used for making designs on the forehead, face, *etc.*, with some fragrant paste, and the latter, in all likelihood, part of a cosmetic container. The chief cosmetic material was the sandal wood from which both powder and oil were extracted and used in the toilet. The consumption of sandal wood on large scale in the city as suggested by literary evidence[2] leads to infer that Varanasi was an important centre for manufacturing sandal wood perfumes and other cosmetic items. Expressions like *Kāsika vilepana* and *Kāsika chandana* also might point in the same direction.

Glass Industry

Eighteen beads of glass were found from this period, and, it may be added, no other objects in this material was found. The colour variation of these specimens include black, different shades of blue, green and opaque glass, and no colourless glass has been reported from this place. Some of the glass beads have also been chemically analysed.[3] It is thus ascertained that silica and alkalies were the main batch materials and copper the main colouring agent; any other ingredients could have come from the impurities present in the batch material. The silica content of this glass ranges from approximately 65 to 70%, and it was invariably the river sand, and not quartz, which was the source of it. Soda was used for alkalies and was frequently employed by the craftsmen, but occasional use of potash along with it is also attested (which might have been obtained from plant ashes). Suggestion has also been made that alkalies might have been obtained from the extract of crude natron *i.e.*, *reh* together with traces of calcium and magnesium salts. We have noted earlier (in the Introductory Chapter) that *reh* is abundantly found in this area which

1. For details and literary references see Chapter VIII.
2. Law, B.C., *op. cit.*, (1943), p. 112. 'A trader of Benares who went with 500 carts to a frontier country and bought sandal wood.
3. Bhardwaj, H.C., *op. cit.*, (1979), esp. pp. 27ff; also by the same author, 'A Note on the Chemical Composition of Glass Beads from Rajghat' *Purātattva*. Bull. Ind. Arch. Society, no. 1, (1967-68), pp. 42-46.

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might have been the staple source for these early craftsmen. It is significant that lead is absent in these glasses, whereas, the same has been reported from Taxila specimens. Another important observation is about the opaque copper red glass, which has a typical composition,[1] and was locally made having the high percentage of copper oxide. It has been noted that foreign recipe for copper red glass are lead compounds, which is absent in the Rajghat glass.

Period III (Early and Late Phase)

Agriculture

Agriculture was much in progress as indicated by the emergence of new equipments like pounders, saddle and legged querns.[2] Like the preceding period, the chief agricultural products were rice and wheat, the actual specimens of which we get only from the early level of this period. Since the pestles[3] (both of stone and terracotta), particularly the larger ones which indicate grinding activity of corns, were highest in number, it might be suggested that wheat was more popular now than in the preceding period and, with rice, formed the staple food of the people. It may be stated here that even now the people of this region eat both rice and wheat and do not depend on a single cereal as in many other parts of the country. There were other additional agricultural products also, like pulses and spices grown during this period. The introduction of barn-like structures in the residential buildings during the late phase of this period might suggest that, surplus grains were stored in such structures. This may lead to infer that the volume of production had increased in comparison to the preceding periods.

Animal Husbandry

Cattle keeping now occupied a more important place in the society than during the preceding periods. It was organised into guilds as evidenced by the occurrence of a sealing bearing the legend *Gavayāka Seniye* (the guild of the, milkmen), in characters of Circa 1st Cent. B.C., around a *Svastika* in the middle.[4] The Buddhist literature also testifies to the existence of such guilds as it mentions *dadhyikā* (dealers in curd), and *ghṛitakuṇḍikā* (dealer in *ghee* in pots) in the list of *Śreṇīs*.[5] The occurrence of the above mentioned inscribed sealing is indicative of the fact

1. Bhardwaj, H.C., *op. cit.*, (1979), p. 43.
2. For details see Chapter VIII.
3. Narain and Singh, *op. cit.*, (1977), p. 65, pl. XVIII.
4. Agrawala, V.S., 'Clay sealings from Rajghat', *JNSI*, XXIII, pp. 410-411. Thaplyal, K.K., 'Nigama and Sreni seals: An Appraisal, *JNSI*, XXX, pp. 146-147, also Thaplyal, K.K., *Studies in Ancient Indian Seals*, Lucknow, (1972), p. 237.
5. *Mahāvastu Avadānam*, (ed. by Senart), III, pp. 113 and 442, as cited in Thaplyal, K.K., *JNSI*, XXX, p. 147.

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that members of this particular guild reared milch cattle and dealt in milk and its products, like curd, butter and ghee. It further leads to infer that dairy products had an important place in the life of the people, and provided means of livelihood to a section of population living in the city. As regards other animals, the position seems to have continued in much the same way as in the preceding period.

Hunting and Fishing

It only needs to be noted that hunting and fishing continued as an important source of livelihood also during this period, and our evidence for it is quite similar to that in the preceding period.

Pottery

The potter's industry, which was in a flourishing state in the preceding Period II, did not remain so during this period. The slow degeneration in the craft which had already started in the late phase of the Period II, received a complete set back by the beginning of this period (*i.e.*, the early phase of the Period III). The skill which had produced deluxe wares like NBP completely went out of use. The red ware become the pottery of the masses and "the industry as a whole suffered decline not only in the choice of clay but also in shapes, surface-treatment and firing."[1] The late phase of this period, however, shows some general improvement in the craft. The coarse pottery of the preceding phase becomes scarce, and the surface-dressing of the pots again assumes an important feature of the industry. The pots were also often decorated with natural or religious motifs.

Clay-Modelling

The artist-modeller of this period (including early and late phase) shows much skill and efficiency in his craft in comparison to the preceding periods, particularly in the production of human figurines. The specimens are noteworthy for their modelling and portrayal of realistic features, and are aesthetically of high order. In the delineation of the dress and ornaments and even in the treatment of facial expression there appears to be distinct attempt to draw inspiration from the prevailing sculptural art. Apart from the above, there are other features like decorations and large scale use of mould which show a marked change from the preceding tradition. Not only does the overall workmanship show a distinct improvement, but also there is a noticeable increase in the number. The general impression is that the craft of the clay modelling is no longer the handmaid of the potters art, but has grown independent and acquired a distinct personality of its own. The clay-modellers were able to sustain themselves because the material produced by them was much in demand by the people living in the city.

1. Narain and Roy, *op. cit.*, (1977), p. 27.

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Textile

The textile industry which was in a flourishing condition in the preceding Period II probably enjoyed the same position also during this period. The costumes as depicted on the terracotta figurines of both the phases bear clear testimony to the developed state of the textile industry in Varanasi during this period. The representation of diaphanous drapery on the figurines, to the extent it can be understood realistically, may also give an idea of the fine quality of clothes and therefore, of the advanced state of the contemporary textile industry.

Blacksmith's Industry

From the point of view of the number of iron objects and also, to a certain extent, of their variety, the Period III is distinctly richer than the Period II. But the early phase of this period yielded in excavations less number of objects in comparison to its succeeding phase (see appended chart 4). The craftsman's tool, knives and axe of the preceding Period II are absent from the first phase of the present period. The agricultural instruments (sickles), weapons (arrow head and spear head) and some miscellaneous objects (nails and rings, *etc.*), however, continued (see pls. XXXIV, B.2, A, 5). The new objects introduced was the ladle which was an important kitchen equipment (see pl. XXVI, A, 4). Besides the above finished objects, to this phase also belong the discovery of iron slags and three blacksmith's hearths.[1] Of these hearths, while the no. 1 is comparatively small, the hearths nos. 2 and 3 are fairly large, measuring upto approximately 3 *m.* or more in length and about 80 *cm.* in width and each containing a white ash deposit of 17 to 19 *cm.* thickness. The white ash deposit found in these hearths might contain lime or some kind of calcium carbonate which had been used as a flux or catalytic agent in the smelting process. But in the absence of a chemical examination of the contents of the hearth, it is not possible to assert categorically about the use of flux.

As already mentioned, the late phase of this period is considerably richer than the early one. The iron objects found are more varied and also show marked increase in number. Iron slags too were found in comparatively larger amount than in the preceding periods. Of the various tools and instruments, the axe which was absent in the preceding phase appeared again. Among the craftsmen's tools, beside the mason's or smith's chisels (pl. XXVI, A, 1, 3), introduction of borer or file (pl. XXVI, B, 1, 2) deserves mention. In the weapons, arrow-and spear-heads continued (pl. XXXIV, A, 2) but lance was a new entrant. The number of spear-heads recovered was so far the highest and leaf-shaped specimens offer a close

1. Narain and Roy, *op. cit.*, (1976), p. 51.

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CHART 4

Periodwise Distribution of the Iron Objects

I. Craftsmen tool	Period I	Period II		Period III		Period IV	Total
		Early Phase	Late Phase	Early Phase	Late Phase		
1	2	3	4	5	6	7	8
1. Chisels	2(?)	4	1	—	6	3	16
2. Adze	—	—	—	—	—	1	1
3. Borer	—	—	—	—	1	1	2
II. Agricultural implements							
4. Sickles	—	1	2	—	2	2	7
5. Axe	—	2	—	—	1	—	3
6. Spade	—	—	—	—	—	1	1
III. Weapons							
7. Arrow heads	—	1	4	5	12	16	38
8. Spear heads	—	6	—	1	5	3	15
IV. Kitchen equipments							
9. Spoons	—	2	1	—	4	—	7
10. Ladle	—	—	—	1	—	1	2
11. Frying shovel	—	—	—	—	—	1	1
V. Objects of household use							
12. nails	5	31	17	18	138	136	345
13. Clamps	—	—	—	—	3	2	5
14. Nail hooks	—	3	7	—	16	10	36
15. Flat rectangular plates	—	—	—	—	2	—	2
16. Staple	—	—	—	—	1	1	2
17. Chain	—	—	—	—	—	1	1
18. Door rings (?)	—	—	—	1	1	1	3

(Contd.)

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CHART 4 (*Contd.*)

1	2	3	4	5	6	7	8
VI. Fishing implement							
19. Fish hooks	—	—	—	—	—	2	2
VIII. Objects of miscellaneous uses							
20. Knives and knife blades	2	1	1(?)	—	13	23	40
21. Blowers (?)	—	—	1	—	1	—	2
22. Horse shoe	—	—	—	—	—	1	1
Indeterminate objects	3	10	2	—	24	3	42
Slags	1	17	20	11	49	19	117
Fragments	—	18	19	7	—	—	44
Miscellaneous	—	5	—	—	6	7	18
Grand Total	13	101	75	44	285	235	753

comparison with those reported from Taxila[1] and Śrāvastī.[2] The ladle of the preceding phase continued, but during this phase the ladle bowl was comparatively of a bigger size (pl. XXVI, A, 9). Staples for securing the doors both from inside and outside came into existence during this phase (pl. XXVI, B, 9). In addition to these, objects of miscellaneous uses, such as knives nails and rings, continued with a few modifications (pls. XXVI, A, 5, B, 4, XXXIV, B, 4). Thus on the basis of the rise in the frequency of iron objects, introduction of new shapes and standardization in the production, we may suggest that the blacksmith's trade was in a flourishing condition during the late phase of this period.

Coppersmith

The variety of objects recovered and their fine workmanship suggest that the copper-smith's industry was also in a flourishing state during the period. The various articles turned out by the craftsmen in both the phases comprise utensils (mainly bowls (fig. 26, 1, 4, 6); ornaments (bangles and rings; see pl. XXXI); toilet

1. Marshall, *Taxila*, Vol. III, Pl. 164, 69.
2. Sinha, K.K., *op. cit.*, (1967), p. 68, 3, 4.

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objects (antimony rods, see pl. XXXIII, A); tools and instruments (borer and blade); and objects of miscellaneous use (nail, rod, wire and hook see appended chart 5). Besides the variety, which is obvious from the above description, other important features to be noted about the copper objects of this period are that they generally record greater frequency in the late phase of the period, and they also show marked sophistication. Bangles, rings and antimony rods form the major part of the collection, and new types are noticed in the rings (see pl. XXXI, 7). The rings and antimony rods of the late phase are particularly marked by fine workmanship. The prosperous nature of the industry thus is quite obvious. But it also needs to be remarked that most of the objects belong to the category of luxury items, and their increased uses can be linked with the growing prosperity of the township.

Manufacture of Bone Objects

The bone points and arrowheads, which have been noted in the preceding Period II, continued to be produced in the early phase of this period. Important evidence in this connection is the discovery of a hoard of bone points consisting of 719 specimens,[1] and 19 specimens of arrowheads and points found from different trenches (see pl. XXVII, B, 4, 8, 9). Some of these, it may be added, are unfinished. The occurrence in the hoard of seven specimens having a slight curve at the tip (see pl. XXVII, B, 2) is interesting, as similar specimens have been reported from Nasik[2] also. Besides the above finds, handle and terminal were new objects in this material. The former is cylindrical in shape; it bears incised grooves on the exterior, and has a truncated flat top and hollow interior to cover the tang portion of some object. The other object is a terminal which is usually inserted as decorative on the top or over the ends of any objects. The use of such specimens can be seen even today.

The late phase of this period shows a marked fall in the frequency of bone points and arrowheads, which were so far the main products of this industry. Their low occurrence, coupled with deterioration in quality, indicates that these products were loosing popularity by the beginning of the Christian era. The emphasis seems to have shifted to the production of objects of miscellaneous use, such as comb, dice, disc, handle and terminal (pl. XXXII, A, 2, 3, 6). Of these,

1. Narain and Roy, *op. cit.*, (1976), Pl. IX, A. pp. 28 and 51. All the specimens obtained from the hoard are badly charred and broken and not a single specimen was found intact. The layer in which the hoard was found gives a clear sign of an extensive fire in a part of the settlement. The hoard represented possibly double-ended points only. The other types as noted in preceding periods are absent in this hoard. They are fashioned roughly merely by flaking, and there is no indication of smoothening, sharpening and polishing the body surface. The pieces are small and light in weight.
2. Sankalia, H.D. and Deo, S.B. *op. cit.*, (1955), fig. 57, pp. 127-128.

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CHART 5

Periodwise Distribution of the Copper Objects

I. Objects of toilet	Period I	Period II		Period III		Period IV	Total
		Early Phase	Late Phase	Early Phase	Late Phase		
1. Antimony rod	1	4	4	4	26	18	57
2. Ear cleaner	—	—	1	—	—	—	1
3. Tooth pick (?)	—	—	—	—	—	1	1
II. Tools and Instruments							
4. Borer	—	1	—	—	3	—	4
5. Blade	—	1	—	1	3	—	5
6. Forked tool	—	—	1	—	—	—	1
III. Ornaments							
7. Beads	—	1	2	3	—	1	7
8. Bangles	1	1	1(?)	—	5	5	13
9. Rings (finger)	—	1	—	4	4	5	14
10. Armlet or pendant	—	—	—	—	—	1	1
IV. Utensils							
11. Lid	1	—	—	—	—	—	1
12. Pots	(fragmentary)	2	1	1	4	2	10
V. Fishing implements							
13. Fish hook (?)	—	—	—	—	1	—	1
VI. Objects of miscellaneous uses							
14. Hook	1	3	2	3	4	1	14
15. Nail	1	7	1	3	6	—	18
16. Pin	—	—	—	—	—	1	1
17. Rod	—	3	—	2	8	1	14
18. Rattle	—	—	—	—	—	4	4
19. Wire	—	2	—	—	2	4	8
Grand total	5	26	13	21	66	44	175

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dice and disc were new objects introduced in this material, and all these were elaborately decorated and show considerable improvement over the earlier ones. It would appear from above evidence that during this phase the craftsmen were required to produce more and more of luxury items. This change in the life-style has already been noticed in the case of other materials like copper.

Carpentry

There is no direct archaeological evidence so far of the Carpenter's industry during the period. However, we may infer its existence on the basis of the presence of door-ways in the houses and of post-holes. The carpenters must have made the door leaves and fashioned the posts for the construction of houses. In fact, the carpenters are likely to have been busy craftsmen, and their economy might have depended on the manufacture of variety of items which are mentioned in the Buddhist texts but about which the archaeological evidence is silent.

Manufacture of Stone Objects

The rise in the frequency of stone objects and the introduction of various new items (see appended chart 6) bear clear testimony to the flourishing state of stone-working during this period. From the available evidence it appears that the craftsmen mainly manufactured objects for use in the kitchen, such as pestles, pounders, saddle and legged-querns (see pls. XXXIII, B, C, XXXV, A, B, XI, B, 2) of varying types.[1] Of these, the first continued from the preceding Period II, and the second, third and fourth were innovations of the early and late phases of this period. However, they manufactured also other objects of miscellaneous use, such as ball, bowl, sharpener, weight, point and lid, all of which are continuations from the preceding Period II, but show variations, in the shape, size, *etc.*, and rise in frequency, particularly during the late phase (see pl. XXVII, A, 4; 6, 7). It seems that this industry offered a good vocation to the stone cutters. A point that may be considered here is whether the stone-cutters were based in the ancient Varanasi or only the finished products were brought to the city. It is true that we do not have unfinished specimens, or any other indication of an industry site. But it must be noted that the raw material, *i.e.*, stone, is available at a distance of not more than 30-40 *km.* from the ancient city.

Ivory

The ivory-working continued during this period also as an important industry. It was a well developed craft and used for making ornaments and luxury goods, as evidenced by the occurrence of four beads[2] and part of what appears like a picture

1. For details see—section II of Chapter VIII.
2. Narain and Singh, *op. cit.*, (1977), p. 43.

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CHART 6

Periodwise Distribution of the Stone Objects

Objects	Period I	Period II		Period III		Period IV	Surface	Total
		Early phase	Late phase	Early phase	Late phase			
1. Pestles	—	3	2	1	15	6		27
2. Stone balls of different sizes	2	1	2	4	4	12		25
3. Bowls	—	1	2	2	4	2		11
4. Sharpener	—	—	1	2	1	—		4
5. Weights (?)	—	1	—	—	2	2		5
6. Rotary quern	—	—	—	—	—	1		1
7. Point	—	—	1	—	1	—		2
8. Saddle quern	—	—	—	—	1	2 (miniature 1)		3
9. Legged quern	—	—	—	—	2	2		4
10. Disc.	—	—	1	1	—	4		6
11. Pounders	—	—	—	1	2	1		4
12. Pounder-pestle	—	—	—	—	1			1
13. Lids	—	—	1	1	2	1		5
14. Designer	—	—	1	—	—	—		1
15. *Ukhlī*	—	—	—	—	—		1	1
Grand Total	2	6	11	12	35	33	1	100

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frame provided with a deep groove (see pl. XXXII, B). This latter specimen comes from the late phase of this period and is elaborately decorated by incised designs all round, showing the skill of the craftsman. It deserves special notice as an identical object of ivory has also been reported from Rairh[1] also.

Bead-Making Industry

As evidenced by the wide range of forms and the technique of manufacture, bead-making showed further development. Certain new materials like shell, quartz and granite were introduced for making beads. Etching[2] which was known to the craftsmen here much earlier, *i.e.*, the late phase of the Period II, and was done in Carnelian alone, is now noticed also in some specimens in agate. The frequency of occurrence of carnelian beads suggests that the late phase of this period "experienced a flourishing industry of beads of this material."[3] The recovery of a few unfinished beads in agate and carnelian (see pl. XXXVI) confirm that it was a local industry. Among other important finds, mention may be made of a stone mould,[4] recovered from the late phase of this period, which could have been used for making beads of terracotta and paste. However, since the beads of paste are absent, it was probably used exclusively for making terracotta beads. The comparative rise in the frequency of these objects suggests the increasing demand of beads and pendants during this period.

Cosmetics and Perfumery

The occurrence of antimony rods, and the elaborate coiffure and spotting of the forehead as seen in the contemporary terracotta figurines may suggest that different cosmetics like collyrium, hair oil and paste were in much demand.

Glass Making

The glass industry which had its beginning in the preceding Period II witnessed further progress and popularity during this period. In addition to beads, this material was used for the first time, and from the very beginning of the period, for manufacturing bangles. Out of a total of seventy-two beads, sixteen came from the early and fifty-six from the late phase of this period. They are of different shades of blue and green, such as navy blue, light blue, sky blue, emerald green, leaf green and greyish green. Other colours are black, black and red, black 'eye' beads, cream and chocolate. From their number it appears that the manufacture of beads was fairly common.

1. Puri, K.N., *op. cit.*, pl. XXII, 12.
2. For details see, Dikshit, M.G., '*Etched Beads in India*, Deccan College monograph, series, No. 4 (Poona, 1949).
3. Narain and Singh, *op. cit.*, (1977), p. 27.
4. Narain and Singh, *op. cit.*, (1977). pl. XV, A, p. 63.

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Of the glass bangles, one specimen of black glass is found from the early phase and eleven from the late one. The bangles of the late phase are of two varieties, *viz* : monochrome and biochrome. From the fine colouring of these glass objects we may suggest that the craftsmen had understood well the chemical aspects of glass-making.

Brick-Making

The production of bricks, either sun-dried or kiln-fired, is attested only from the beginning of this period. Standardization in their size and production of two types of bricks, one for the construction of houses, *etc.*, and another for use exclusively in circular structures, leads to suggest that it was a specialized industry. The extensive use of bricks in both the phases suggests production on large scale.

Tile-Making

Like brick-making, the manufacture of tiles (see pl. XI, A, 2) also makes its beginning in this period. Tiles have been recovered in fairly large numbers and from both the phases of this period, suggesting their popularity and manufacture on mass scale. Again, as in the case of bricks, the tile industry also must have engaged a large number of workers, but it is difficult to be certain whether the brick-makers and the tile-manufacturers belonged to the same professional class or were quite independent of each other. If we go by the present-day analogy and also considering the different techniques of manufacture involved, the latter alternative seems preferable.

Period IV

Agriculture, Animal Husbandry, Hunting and Butchery

There is no direct evidence of cereals during this period. However, considering the continuity of the similar objects and other evidence related to agriculture and food habits, as has been noted earlier, we may surmise that the agricultural products of this period also were the same as in the preceding Period III. Whether any new agricultural products were also added, it is difficult to say.

Similarly the occurrence of the remains of animal bones and representation of cattle and other domesticated animals in terracotta figurines suggest the practice of animal husbandry.

The relative abundance of arrowheads, knives, the introduction of fish hooks and the presence of spearheads suggest that hunting, slaughtering of animals and fishing were practiced and offered a source of living to many even during this period.

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Pottery and Clay Modelling

The potters' industry during this period shows, according to the excavators of Rajghat, "slight improvement over the preceding industry in shaping and surface treatment."[1] The Red Polished Ware, which was confined to the sprinkler form in the preceding Period III, yielded other forms as well. Besides, some new shapes were also added to the ordinary red ware.

The terracotta industry showed unprecedented growth. Moulds for making plaques were also found.[2] The "human figurines show a remarkable growth of this art."[3] New themes appear in the religious and lay figurines. The moulds are noteworthy for their elegance and fine workmanship. Quite a few new forms and styles appeared in the ornaments and the coiffures, along with the preceding ones.

Textile

As in the preceding Period III, we have for this period too only the indirect archaeological evidence of representation on the contemporary terracotta figurines. Keeping the limitations of this kind of evidence in mind, it can be said also of this period that a variety of cloth, including very fine cloth, was manufactured and the textile industry was in a developed state. People wore printed as well as embroidered clothes, bearing designs, and dyeing and embroidery were established professions allied to this textile industry.

Blacksmith's Industry

The iron industry continued as an important industry also in this period, as in the preceding Period II and III. Most of the items found in this metal continued from the earlier ones, with some modification. Although the number of objects recovered is comparatively less, it must be borne in mind that the period witnessed the introduction of some significant new objects, particularly in the agricultural and domestic equipments. Among the agricultural implements, while the sickle was known also in the previous periods, spade was new entrant here. Borer and smith's or mason's, chisel (pl. XXVI, A, 2, B, 2) continued from the preceding Period III as the craftsman's tool. Among the weapons, arrowheads and spearheads (pl. XXXIV, A,1) appeared in relatively less number. The chain, nail (pl. XXVI, A, 6, 8), ring and staple must have formed part of the necessary equipment of every house, as presumably wooden doors alone were in use. The occurrence of frying shovel (see pl. XXXIV, B, 1) is a noteworthy introduction in the kitchen equipments. The

1. Narain and Roy, *op. cit.*, (1977), p. 64.
2. Narain and Singh, *op. cit.*, (1977), p. 16.
3. *Ibid*, p. 15.

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other objects included horse-shoe, blade fragments, door-bosses, knives (pls. XXVI, B, 3, XXXIV, B, 6, 9) and several indeterminate objects. Although scientific analysis of the iron objects of this period has not been done, their variety may perhaps suggest further progress of the blacksmith's industry.

Coppersmith

The working of copper also was a living and important industry of the period. Although the total number of copper objects is comparatively less (see appended chart 5) in this period than in the preceding III, it must be emphasized that not only majority of the items representing the various groups continued with modifications in this period, as is obvious from the appended chart 5, but they also exhibit appreciable improvement over the earlier ones. Some of the specimens of the antimony rod, bangle, finger ring, armlet and vessel speak of the fine workmanship of the craftsmen. Among these, the bangle with beaded pattern and the armlet with elaborate decoration in relief need special mention (see pl. XXXI, 1, 5). The representation of the miniature vase is noticed for the first time (fig. 26, 8). Besides, armlet, hook and the tooth pick (?) (pl. XXXIII, A, 13) were new objects introduced during this period.

Bone Industry

The Period IV has yielded bone objects of comparatively less variety, which may suggest possible decline of the industry, or at best, only a slow progress of it.

The disc, handle and terminal of the preceding period are absent here, while comb, with some variation, and dice continue. The other objects like arrowheads and points, which were the major products of this industry upto the end of the early phase of the Period III and which had already started loosing popularity in the late phase of the same period, nearly disappear in the Period IV. Probably the growing use of iron was responsible for the reduced demand of these tools.

Carpentry

The existence of a carpenter's industry during the period may be imagined on arguments similar to those for the preceding Period III. Besides, the existence of the underground structures during the period, in which substantial timber work was needed, also indirectly suggests the existence of the professional class of carpenters.

Stone-and Ivory-Working, Bead-Making; Cosmetics and Perfumery

In the above mentioned crafts and industries, the traditions of the preceding period continued, with some modifications. Among the stone objects, majority of

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items of the Period III are witnessed here, and if they are comparatively less in number, they show on the other hand improved workmanship. The sharpeners and points of the preceding periods disappeared, but there is an increase in the frequency of stone-discs and balls. The rotary quern is a new introduction by the side of the saddle and legged-querns (see pl. XI, B).

A disc bead,[1] a fragmentary hook-pendant and an indeterminate object are the only examples of ivory work, but enough to suggest a living industry. The last mentioned specimen is noteworthy for its delicate carving of creeper design in relief (see pl. XXXII, A, 4).

In bead-making, we notice the introduction of some new shapes in stone and other materials. Granite beads are absent, and terracotta and glass have yielded the finest specimens.

From the point of view of the cosmetic industry, a complete miniature casket of soapstone with a lid having rudimentary knob at the top is a noteworthy find of the period (see pl. XXVII, A, 5). Such specimens may have been used for keeping perfumes or other kinds of toilet materials like fragrant pastes or powders.

Glass Industry

In addition to bangles and beads, which continued from the preceding period, new objects of glass, like finger ring, were introduced by the craftsmen. It must be emphasized that the Period IV has yielded the largest number of glass bangles and beads, and they have been produced in a variety of colours. Another noteworthy feature in regard to the occurrence of the bangles is that a number of them was found to be irregularly shaped (see pl. XXXVII). This evidence clearly point to the local origin of the bangles. It seems that the glass industry came to real prominence during the Period IV and made its debut here in the early phase of the preceding Period III, was in great demand in this period.

Manufacture of Bricks and Tiles

The brick and tile making industry, which had its beginning in the preceding Period III, was in a flourishing state as is suggested by the extensive use of these materials.

Shell Objects

The Period IV has yielded, besides bangles and rings (pl. XXIX), also a few lumps of shell showing original working, and it seems that the manufacture of shell objects probably started in this period. Earlier, the finished products may have been brought here from some other regions.

1. Narain and Singh, *op. cit.*, (1977), p. 43.

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Economic Organisation

The position of the various crafts, industries and associated professions has been outlined in the above pages. It is clearly suggested from it that the pace of economic activity in ancient Varanasi became brisk from our Period II, and, generally speaking, maintaining a steady growth, it reached its high point in the Period III and more or less stayed at that level also during the succeeding Period IV. All this development implies considerable economic organisation. Unfortunately, it is only for the Period III and IV that we have clear archaeological evidence to throw some light on this aspect, inscribed sealings mentioning craftsmen's trader's guilds belong only to these periods.[1] It must not be forgotten, however, that inscribed evidence of any kind is generally not available before the Mauryan period. Considering the much increased economic activities during the Period II, organisations of various craftsmen and other professional groups must be presumed to have been developed already in that period. If we have no archaeological evidence in support, there are adequate literary references to compensate for it. The evidence of the Buddhist texts, especially the Jātakas, is particularly relevant in this respect. The Jātakas are not only the richest source of information about guilds in this period, they specifically refer to these corporate bodies in ancient Varanasi.

The institution of guilds is the characteristic of an advanced stage of economic progress, and its development can only be imagined in the background of considerable localisation and specialization of various crafts and industries and overall economic prosperity.[2] According to modern scholars, generally, the evolution of guild system was part of the significant economic change that appeared in the age of the *Mahājanapadas* and the rise of Magadhan imperialism *i.e.*, between C. 600 B.C. to 200 B.C.,[3] which, incidentally, corresponds to our Period II, Literary texts of various types belonging to this period refer to this institution. However, as already stated, the Buddhist Jātaka stories are our main source of information for this development.[4]

The Jātakas refer to guilds or *Senis* (skt. *Śreṇis*) as well developed corporate

1. These will be shortly discussed below.
2. See Adhya, G.L., *Early Indian Economics*, Bombay, (1966), pp. 83-84.
3. See Sharma, R.S., *Light on Early Indian Society and Economy*, Bombay, (1966), p. 60.
4. The institution of guilds and the Buddhist evidence on it, especially that of the Jātakas, has been studied by several modern scholars; see esp. Fick, R., *The Social Organisation in Narth-East India in Buddhas' Time* (tr. by S.K. Maitra from original German; Varanasi and Delhi), (1972), pp. 267ff; Bandyopadhyaya, Narayan Chandra, *Economic Life and Progress in Ancient India*, Vol. I, Hindu Period, Cal., (1945), pp. 246-253.; Bose, A.N., *Social and Rural Economy of Northern India*, Cal., Vol. I, (1961), pp. 281, ff. also Sharma, R.S., *op. cit.*, (1966). p. 63; Adhya, G.L , *op. cit.*, (1966), pp. 84-85, and Majumdar, R.C., *Corporate Life in Ancient India*, Cal., (Third edition 1969), pp. 9, ff.

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bodies of highly localised and specialized craftsmen and traders, organised under a leader, called *Pamukha* (chief) or *Jeṭṭhaka* (Alderman). They refer to *Kammāra-jeṭṭhaka*,[1] *Vaḍḍhaki-jeṭṭhaka*,[2] *nesāda-jeṭṭhaka*[3] and *satthavāha-jeṭṭhīaka*[4] specifically in respect of Varanasi; thereby suggesting that the smiths, carpenters, hunters and carvan-leaders of ancient Varanasi had organised themselves into guilds. Perhaps several other similar guilds also existed, but we can only surmise about them on the basis of the picture of crafts and industries already sketched by us for the Period II. In fact, so marked was the feature of localisation of crafts during the period that streets, localities and entire villages bore names of various craftsmen. The Jātaka stories mention not only the ivory-carvers here in Varanasi but also entire villages or settlements of smiths, carpenters, hunters and potters just outside the limits of the ancient city.[5] These villages must have formed the 'Umland' of the main settlement.[6]

The known history of guilds shows that not only they continued to exist in later times, but also its power and prestige grew in Mauryan, post-Mauryan and Gupta periods.[7] In Varanasi, the existence of the institution of guilds during the Period III and IV is proved by the evidence of inscribed terracotta sealings belonging to those periods. They have been recovered both from regular excavations as well as salvage railway diggings,[8] and the latter are generally dated on palaeographic considerations. These sealings are classifiable into two broad groups, *viz.*, (i) sealings belonging to some *śreṇi* and (ii) those belonging to a *nigama*.

We have sealings of both the varieties even from the early phase of the Period III. The *śreṇi* type of sealing bears the legend '*Gavayākaseniye*', to which a reference has already been made. Its occurrence proves that the people who reared milch cattle and dealt in milk and milk products had organised themselves into a guild to carry on their day to day transaction. The *nigama* sealing was obtained from regular excavation, and bears the legend *nigamasa* in characters of C. 1st Cent.

1. Fausböll, Vol. III, p. 282.
2. Fausböll, Vol. IV, p. 161.
3. *Ibid.*, Vol. VI, p. 71.
4. *Ibid.*, Vol. II, p. 295.
5. See Chapter II above, on 'The Town and its Structures'.
6. Singh, R.L., *op. cit.*, p. 116. 'Umland' has been defined as the immediate rural land surrounding the city.
7. See Sharma, R.S., *op. cit.*, (1966), pp. 75-76, 84-85; also Adhya, *op. cit.*, (1966), pp. 85 ff.
8. The part of the Rajghat report which is to deal with seals and sealings is as yet unpublished. K.K. Thaplyal had used this material also for his study (*op. cit.*, 1972), but in his published monograph, he refers only to a *nigama* type of sealing. The material from the salvage railway digging of 1940 has been mainly studied by V.S. Agrawala (*JNSI*, XXIII), Motichandra (*Kāśī Kā Itihāsa*) and Thaplyal (*op. cit.*, 1972). Since the sealings from regular excavations were not available to us for the present study, we have depended solely upon the published materials of the above scholars.

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B.C.[1] Sealings of this variety have also been found from the late phase of this period. They bear the legend *negamasa* (in the four corners of a square enclosure) or *nigamasa* in early Kushāṇa letters.[2]

Sealings of both the varieties have been recovered also from the levels of the succeeding Period IV. The *śreṇi* type of this period bears the legend *Vārāṇasyāraṇyaka-śreṇi*. Although the expression is to be literally rendered as "the guild of the forest people of Varanasi." the use of the word *śreṇi* makes it quite clear that the reference here is not to any ordinary residents in forests near the ancient city, but to professional groups of people deriving their living from forests and dealing in forest produce. The sealing, therefore, shows that such a professional class lived in ancient Varanasi and had organised itself into a corporate body.[3] As regards the other variety of sealings Agrawala[4] mentions about half a dozen, bearing the legend *nigama* and assignable to this period on palaeographic grounds. They show a device like a domed structure,[5] and record the names of individuals such as *Bharata*, *Śrīdattā* and *Śauryāḍhya*. Besides, Motichandra[6] has also mentioned a few sealings of the *negama* type, which can be grouped as follows (i) those which bear the legend *nigama* on one side and *janapada* on the other; and (ii) those which bear *Haridāsa* and *nigama*.

The evidence of the inscribed sealings examined above clearly proves the existence of both *śreṇi* and *nigama* in Varanasi during our Periods III and IV. But while the *śreṇi* type of sealings also clarify through their legends the nature of *śreṇi* as an economic institution, *i.e.*, as a corporate body of professional persons engaged in specific economic activities, those of the *nigama* type do not themselves provide any such help. The word *nigama* is mentioned in literature, inscriptions and also coinlegends, but it has been interpreted differently by different scholars. It has been variously understood as a guild, township and "body of townsmen," a merchant-town or market place, a body of wealthy traders, *etc.*[7] However, it seems reasonably certain that the word not only carried the sense of a business locality but also a business community, thus implying some kind of economic organisation. Also, it should not be understood as synonymous with *śreṇi*. While the latter was

1. Thaplyal, K.K., *op. cit.*, (1972), p. 224.
2. Agrawala, V.S., *JNSI*, Vol. XXIII, p. 411, also Thaplyal, *op. cit.*, (1972), pp. 224-225.
3. Agrawala, V.S., *JNSI*, Vol. XXIII, p. 410 and Thaplyal, *op. cit.*, (1972), p. 238.
4. *JNSI*, XXIII, p. 411.
5. Agrawala identifies the domed structure as granary but Thaplyal thinks that it probably represents a money chest.
6. Motichandra, *Kāśī kā Itihāsa*, pp. 91-92.
7. See Thaplyal, K.K., *op. cit.*, (1972), pp. 227-229, where the opinions of other scholars are also cited; also Bhandarkar, D.R., *Lectures on Ancient Indian Numismatic*, The Charmichael lectures, 1921, Cal., (1921), p. 6., Marshall *Taxila*, Vol. I, pp. 26-27, Ghosh, A., *op. cit.*, (1973), p. 46, and Agrawala, *JNSI*, Vol. XXIII, p. 411.

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a narrower, more close-knit body of a specific professional class, often with hereditary membership, *nigama* was by comparison more broadbased and only a loosely organised institution. It may have been, as one scholar suggested, a body of wealthy traders or merchants dealing in various commodities.

What is the significance of the personal names of individuals appearing in the *negama* seals of the Period IV is difficult to say, and it is not clear in what relation did *Bharata, Śrīdatta, Śauryāḍhya* and *Haridāsa* stood to the *nigama.* Probably they were important members of this body.

Media of Transaction

There is very limited material about the media of exchange during the different periods of our study. No coins are reported from the Period I. But it is surprising that no punch marked coins are reported from any of the two phases of the Period II, in fact, they are not reported from any Period of Rajghat excavations. A few uninscribed cast coins have been recovered, both from the late phase of the period II[1] as well as the Period III.[2] To the Period III also belong two "local issues" or "city coins" of Varanasi, which bear the figure of a horse on the obverse and the Ujjain symbol with the legend Varanasi on the reverse.[3] The late phase of this period also yielded in excavations coins of Ayodhyā and Kauśāmbī, which bear the legends *Sivadatasa*-and *Navasa* respectively.[4] Lastly, a few copper coins[5] and four Gupta gold coins[6] are reported from the period IV; the gold coins belong to Chandra Gupta, Kumar Gupta I and Skanda Gupta. To the above information, we may add from personal knowledge that Cowrie shells in fairly good number were regularly brought out in excavations from all the periods, excepting I.

The absence of coins from the Period I is only to be expected, since the material remains of that period clearly suggest its undeveloped, rural economy, and for the simple needs of the people, barter system would have been adequate. But the absence of any punch-marked coins from the Period II is very curious. By a common consensus of modern scholars, the punchmarked coins are the earliest series of Indian coins, which originated around 500 B. C. and remained in very wide circulation for several centuries. Whether they were always issued by trading

1. Narain and Roy, *op. cit.*, (1977), p. 9; also Bhardwaj, H.C., 'Chemical Composition of Some Local Bronze and Copper Coins from Northern India, '*Seminar Papers on the Local Coins of Northern India*, pp. 161-163.
2. Narain and Roy, *op. cit.*, (1977), p. 11.
3. *JNSI*, XII, pt. II, pp. 134-135, pl. XI, 5-6; also Lahiri, Bela, 'Typological Study of the Local Coins of Northern India,' *Seminar Papers on the Local Coins of Northern India*, pp. 49-50.
4. Narain and Singh, *op. cit.*, (1977), p. 14.
5. *IAR*, 1957-58, pp. 50-51.
6. Narain and Roy, *op. cit.*, (1976), p. 31.

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communities or also sometimes by state authorities may be a little uncertain, but it is clear that they originated in response to the economic needs of the age, which witnessed unprecedented growth of industries and trade.[1] From the archaeological point of view the punch—marked coins seem to be an essential feature in the make-up of the NBP Ware Culture. The contemporary levels of the neighbouring sites of Masaon[2] and prahladpur[3] have also yielded them. The absence of these coins from our period II, therefore, can only be an unusual coincidence. From the position of the varied and rich crafts and industries, and trade, during this period, there should be no question about punch—marked coins being as much in circulation here as in other contemporary centres.

If the *Kārṣāpaṇas*, or the *Kahāpanas* of the Buddhist texts, refer to punch-marked coins, as is very often believed,[4] then we have also some literary support for our supposition. The Jātaka stories, it may be noted, not only show a very extensive circulation of *Kahāpanas*,[5] but often also mention the use of these coins for all kinds of transactions in Varanasi.[6] The punchmarked coins in circulation here, especially the higher denominations of them and the silver pieces, would have been easily used to meet the requirements of large scale business transactions. But the uninscribed copper cast coins, which make their appearance in the late phase of the Period II and continue in the Period III, do not seem to be of very high value and were probably only meant for small local transactions. Perhaps the "city coins" of Varanasi, assignable to the Period III, also circulated as currency and were issues of some trading corporation in the city, but it is not quite certain.[7] However, if our assumption is correct, it would also suggest the importance of Varanasi as a centre of inland trade during this period. The recovery of Ayodhyā and Kauśāmbī coins from the late phase of the period may at once show

1. For the punch-marked coins, see (Rapson, E.J., *Indian Coins*, Varanasi, (1969), p. 3, see also Narain, A.K., *et al.*, (ed), *The Chronology of the Punch-Marked Coins*, esp. the Paper Contributed by P.L. Gupta and summary of discussions at the end; also Basham, A.L., *The Wonder That Was India*, London, (1961), pp. 504-505; Sharma, R.S., *op. cit.*, (1966), pp. 64-65.
2. *IAR*, 1967-68, p. 47.
3. Narain and Roy, *op. cit.*, (1968), p. 62, pl. XXVI.
4. This is the assumption of several papers in Narain, A.K., *et al.*, (ed.) Seminar papers on *The Chronology of Punch-Marked Coins*, see also summary of discussions at the end. It is true that modern scholars hesitate to give unreservedly to punch-marked coins any of the several words for coins available in literature, but *Kārṣāpaṇa* has always been regarded as a relatively greater favourite. The main reason for hesitation in this case is that while literature generally refers to *Kārṣāpaṇa* as a copper currency, the punch-marked coins, though also issued in copper, were essentially silver coins.
5. See Shastri, A.M., in Narain, *et al.*, (ed.), *The Chronology of Punch-Marked Coins*, p. 114.
6. Saletore, R.N., *Early Indian Economic History*, Bombay, (1973) p. 611; also Misra, G.S.P., *op. cit.*, p. 267.
7. See Singh, J.P., 'Negama and City Coins', in Sircar, D.C., (ed.), *Early Indian Indigenous Coins*, pp. 101 ff.

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acceptance of these coins as currency in Varanasi, and trade contacts with those places. The circulation of at least Kauśāmbī coins is also explained on the consideration that Varanasi probably came under the political influence of the Magha rulers of Kauśāmbī at about the same time.[1] No special comments are necessary about the Period IV, except that the gold coins would have been used, as is generally believed, in big scale transactions and copper coins for small business.

Two more comments are necessary to complete this discussion of the media of exchange. Firstly, coins, even of very small denominations, would generally have remained in the hands of relatively well-to-do persons, and often beyond the reach of the poorer sections of the community. In such cases, mostly, Cowrie shells served as an alternative medium of exchange.[2] It has already been noted that they were recovered in good numbers from the Period II to IV. In fact, they are likely to have been in use even in the Period I, from which they were somehow absent in the excavations. The remark of the Chinese piligrim Fahien that "in buying and selling commodities they use Cowries"[3] is more directly relevant for our Period IV,[4] but it may be largely true for all the periods of our study, especially in small day-to-day transactions. With the easy availability of this cheap monetary token, even an actual scarcity of small coins at any time may not have created any serious difficulty. Secondly, with the introduction of coinage from the Period II onwards and the significant change in the economic situation, the barter system is likely to have become less popular, especially in growing urban centres like Varanasi. But apparently, it never completely went out of vogue. It is interesting to note that according to a Jātaka tale, rice was used as a standard of value in Varanasi.[5] Even today, in the rural areas of this region, food-grains are considered as a standard of value and frequently used for exchange of goods of equal worth.

Means of Transport

Although direct archaeological evidence is lacking, there are some indirect indications of the different means of transport. It is clear that both land and water transports were in use, and the former included the use of animal-drawn vehicles and pack animals.

Numerous fragmentary and complete examples of terracotta toy cart-wheels[6] found during the various periods of our study give some idea of the wheeled

1. For details, see Chapter I.
2. On Cowries as currency, see Sircar, D.C., *Studies in Indian Coins*, pp. 279 ff. also Pandey, D.B., 'Cowries as a Monetary Token in Ancient India", *JNSI*, XXVIII pt. II, pp. 129 ff.
3. Legge, James, (ed.), *Fa-Hein's Records of the Buddhist Kingdom*, Oxford, (1886), p. 43.
4. cf., Maity, S.K., *Economic Life in Northern India*, p. 223.
5. Cowell, Jātaka no. 5.
6. Narain and Singh, *op. cit.*, (1977), pp. 61-62, pl. XIII.

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vehicles such as carts which were in use at this place. Presumably they were wooden-carts and were used for carrying goods and passengers. It may be noted that the terracotta wheels of the first two periods (*i.e.*, I and II) are plain without spokes and hub but have a hole in the centre to take the axle. The spoked wheels are seen only in the specimens from the late phase of the Period III and from the Period IV, but while in the former case, they show only one hub, presumably on the outer-side, the latter are provided with two hubs. But these differences may not reflect any real changes in the form of the actual cart wheels in use, and they may only be the result of differences of the terracotta styles during the different periods.

For land routes, animal-drawn carts seem to have been the most important means of communication, and people, especially traders, travelled to distant places through these carts. The Buddhist texts also frequently refer to the movement of traders and merchants of Varanasi with several hundred carts.

A good percentage of terracotta figurines belonging to different periods are animal figurines, and those which are more or less identifiable include horses, elephants, bulls, camels, mules, *etc.* Such animals may have been used for drawing vehicles and carrying loads. The recovery of a good number of elephant and horse figurines with a rider on the back from the Period II onward supports the view that these animals were used as means of conveyance.

Evidence in support of boat or ship is lacking, due to the perishable nature of the material. However, the wooden planks laid on the river side during the early phase of the Period II and the position of the underground structures belonging to the Period IV, all constructed along the course of the river Ganga, point out that transportation of goods through river was common.

Trade

In the preceding pages we have discussed in detail the position of the various crafts and industries, nature of economic organisation, media of exchange and means of transport. All these, particularly the crafts and industries, are intimately connected with trade. Generally speaking, the overall growth of crafts and industries from the Period II onwards implies corresponding growth of trade. The construction of a wooden landing along the river bank during the Period II apparently to facilitate also water transport of goods, the massive warehouse complex of the Period IV, and the increasing numbers and influence of guilds of craftsmen and traders from the Period II to IV also all indicate growing trade activities during the various periods. But it must be stated at the outset that archaeological evidence during the various periods of our study is not sufficient to establish definitely trade relations of Varanasi with different places, either within the country or outside.

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The literary data clearly indicates that the major items for long distance trade generally comprised luxury goods, such as clothes, for which Varanasi was much praised, objects of ivory, sandal wood, perfumes, *etc.*, which are all items of perishable kind. Ordinary goods such as pottery (ordinary wares), objects of bone, terracotta, *etc.*, generally found local market as they would not bear transport expenses.

There are, however, some archaeological antiquities which, if carefully studied, may throw some light on trade connections, and a short discussion of such evidence is being presented here. The materials relevant for us are certain beads of precious stones and glass, copper objects, ivory objects, pottery and terracotta sealings bearing foreign motifs. Barring the last mentioned, which belongs in a category by itself, for obvious reasons, the methodological problems involved in the study of the others are more or less similar. We have proceeded on the assumption that if a comparative study of these with similar objects from other places reveals close resemblance of form and technique of manufacture, it may suggest common origin of the objects concerned or atleast of the technique, and therefore, on that basis, some contacts, and possible trade contacts, with those places may be imagined. No doubt, this method has obvious limitations, any inference based on it would be considered strong only to the extent it became possible to suggest that a certain type of technique is native to one place and intrusive in another. But that would require a much more detailed study, including scientific study, of the materials of other places and of the techniques of manufacture involved, which is beyond the scope of the present investigation. We have, therefore, confined ourselves only to superficial comparisons. However, care has been taken to select only such specimens as show even on superficial examination not only marked typological and stylistic resemblance but also highly specialized techniques, strongly suggesting common origin of some kind. Besides the comparative study as above, we have also utilized the argument of availability of raw materials, for beads and metal objects, to imagine possible trade contacts. Perhaps it would not be inappropriate to add that both these methods to determine trade connections have achieved a certain respectability among the modern archaeologists.

Evidence as to the nature of trade in the earliest Period I is scarce, which shows limited and short distance trade based on barter. However, the position appears to have undergone considerable change in the succeeding Period II, which is marked by the rise and growth of several crafts and industries formation of guilds and also increase in trade activities. According to the Buddhist texts during this period Varanasi had close commercial links with cities like Rājagṛiha, Śrāvastī, Ujjain, Taxila, *etc.*, on the one hand and foreign regions like Babylonia on the other (see appendix at the end). This picture is only partly confirmed by the evidence of archaeology, which, in the main, consists of a comparative study of beads and determination of the sources of raw material for them, and which suggests possible

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trade contacts of some sort with Śrāvastī, Ahichchhatra, Taxila, parts of Central Asia, Bihar, Orissa and the coastal regions of the Bay of Bengal.

A long barrel circular bead of banded agate[1] coming from the late phase (c. 400 B.C. to 200 B.C.) of our Period II is comparable with almost identical beads from the early level of the Period I and II at Śrāvastī.[2] Then, a short barrel circular bead of Carnelian[3] dated to the same chronological bracket as the preceding one is identical with a bead of the same material found at Ahichchhatra,[4] datable between C. 3rd Cent. B.C. and 2nd Cent. B.C., the chronological agreement being better in this case. Similarly, a double hexagonal bead of green jasper[5] belonging to this period is well comparable with the identical bead reported from Taxila[6] and datable to Circa 3rd Cent. B.C. In all the above cases, the resemblance extends so far that a common origin or movement of goods preferably from a common centre is easily suggested, this pointing to the possibility of trade contacts with the respective towns.

As already noted, a study of the sources from where the raw material for the beads was obtained is also instructive. In this connection beads of lapis lazuli are of considerable interest as the material is not indigenous to India. Several beads of lapis lazuli have been recovered from the Period II; in fact, they have been recovered also from the Period III and IV and number 39 in all.[7] Beads of this material have been found from other places also, such as Brahmapuri,[8] Kauśāmbī,[9] Srāvastī,[10] Taxila, *etc.*[11] The chief source of lapis lazuli has long been the Kokcha valley of Badakshan in Northern Afghanistan, but this stone is said to occur also in 'Tartary' Tibet and China.[12] Either the raw materials or the finished products, therefore, must have been imported to the Indian centres from these western regions. This leads us to surmise that Varanasi was connected with central Asia by trade routes. It is, of course, possible, in fact highly probable, that instead of a direct link between Varanasi and such distant places, there was some kind of a central place, like Taxila, which served as a dispersal centre for Varanasi and other

1. Narain and Singh, *op. cit.*, (1977), pl. I, 5, 6, p. 27.
2. Sinha, K.K., *op. cit.*, (1967), fig. 18, 3, 4, p. 62.
3. Narain and Singh, *op. cit.*, (1977), pl. III, 12, p. 28.
4. Dikshit, M.G., 'Beads from Ahichchhatra', *AI* no. 8, (1952), fig. 2, 31.
5. Narain and Singh, *op. cit.*, (1977), p. 43.
6. Beck, H.C., 'The Beads from Taxila', *MASI*, no. 65, (1941) pl. VI, no. 37.
7. Narain and Singh, *op. cit.*, (1977), p. 44.
8. Sankalia, H.D., and Dikshit, M.G., *Excavations at Brahmapuri (Kolhapur), 1945-46*, Poona, (1952), p. 91.
9. Sharma, G.R., *op. cit.*, (1969), pp. 111-112.
10. Sinha, K.K., *op. cit.*, (1967), pp. 61-62.
11. Beck, H.C., *op. cit.*, (1941), pp. 15-16.
12. Marshall, *Taxila*, Vol. II, p. 478 also Coggin Brown, J., and Dey, A.K., *India's Mineral Wealth*, Oxford University Press (Third edition, 1955), pp. 637-638.

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Indian towns. The case of coral is similar to that of lapis lazuli, since this material also had to be brought from elsewhere. Beads of coral have also been recovered from this period, and we may add, also from the Period III and IV, numbering 28 in all.[1] Both the varieties of coral—Favia fabus and the Favia speciosa, have a wide distribution throughout the Indian and Far Eastern seas.[2] It is likely that the nearest source for this material was the region of the bay of Bengal,[3] from where either the raw material or the finished product was brought to this place by way of trade.

The remaining precious and semi-Precious stones, such as topaz, agate,carnelian, chalcedony, jasper, crystal, *etc.*, of which also beads have been found in good numbers from this period as well as the subsequent periods,are available in Bihar and Mirzapur areas.[4] These raw materials. therefore, must have been obtained from those regions, In this context, it may be also remembered that, as mentioned earlier, the people of Varanasi seem to have exploited the Bihar and Orissa mines (Singhbhum, Mosaboni, Rakha and Mayurbhanj) for iron and copper. All this, incidentally, suggests that there was a fairly brisk movement of goods or raw material between Varanasi and different regions of the neighbouring Bihar.

The evidence for trade connections between Varanasi and other places during the Period III is relatively richer than for the previous period. A variety of archaeological material belonging to this period—beads, pendants, objects of copper, ivory objects, pottery and terracotta sealings—offer very fruitful comparisons with similar objects from other places, thereby suggesting common origin and, thus, probabilities of trade contacts. Among the beads and pendants a hexagonal bead of green jasper[5] is comparable with an identical specimen from Vaiśālī,[6] assignable to a contemporary level. Similarly an inverted drop pendant[7] of carnelian has an exact counterpart in shell and glazed quartz from Taxila,[8] datable to 1st Cent. A.D. Leech beads of agate belonging to this period also provide very interesting evidence.[9] This type has been reported from sites like Ahichchhatra,[10] Śrāvastī,[11] Taxila,[12] *etc.*

1. Narain and Singh, *op. cit.*, (1977), pp. 31-32.
2. Marshall, *Taxila*, Vol. II, p. 740.
3. For this suggestion, we are indebted to Dr. V.K. Gairola of the Geology Department, B.H.U.
4. Information kindly given by Dr. V.K. Gairola.
5. Narain and Singh, *op. cit.*, (1977), pl. V, 14, p. 44.
6. Sinha, B.P., and Roy Sita Ram, *Vaiśālī Excavations 1958-62*, pl. LXV, 19, p. 183. The specimen is obtained from the Period III datable to C. 200 B.C. to A.D. 200.
7. Narain and Singh, *op. cit.*, (1977), pl. VIII, 5, p. 52.
8. Beck, H.C., *op. cit.*, (1941), pl. VIII, 17, pl. V, 6-7.
9. Narain and Singh, *op. cit.*, (1977), pl. I, 18, p. 24.
10. Dikshit, M.G., *op. cit.*, (1952), fig. 2, 42, p. 43.
11. Sinha, K.K., *op. cit.*, (1967), p. 61.
12. Beck, H.C., *op. cit.*, (1941), pl. III, 1-6 and 37; IV, 8, 9 and 35.

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Our specimen closely resembles the one reported from Ahichchhatra, which, however, is obtained from the surface. At Taxila, it is found from the levels ranging from 7th-6th Cent. B.C. to 1st Cent. B.C. Leech bead, it may be noted was a favourite shape in western Asia and Persia.[1] It has been suggested that the homeland of the leech bead was Persia and Sharma[2] has further developed this suggestion in the form that from that country the type diffused to the west and to the east, towards Taxila and other north Indian sites. Marshall, however, thought that these beads were of Indian origin. So far as the question of Rajghat specimen, is concerned, they are quite late in point of time in comparison to those of Taxila and Śrāvastī where they were known from a much earlier date. It is, therefore, likely that the technique and shape of the leech bead was borrowed by way of trade contacts from any one of the two sites or both and then copied here by local craftsmen. It may be recalled that beads of agate and carnelian were already being manufactured here during the period.

Another important evidence is of the glass, 'eye beads' of this period. Beads of this type in glass have also been reported from Śrāvastī,[3] Taxila[4] and Nevasa.[5] Marshall[6] imagined Persian influence for these beads, and according to Beck,[7] the 'eyebeads' of Taxila were of Mediterranean origin. Our specimens are of much later date and also exhibit variations in the representation of the 'eyes', suggesting thereby indigenous workmanship. There is another class of 'eye beads' from Rajghat in banded agate,[8] in which the stone was cut in a manner that the natural bands formed themselves into 'eyes'. This is also not a common type and is reported also from Śrāvastī and Taxila. It seems, therefore, reasonable to guess that like leech beads, the technique of manufacturing 'eye beads' in two different materials, *viz.*, stone and glass, was learnt by way of commercial contact-from any of the two sites, Taxila and Śrāvastī or both.

An interesting variety of beads and pendants of the Period III consists of specimens which obviously derive their shape from common animals and birds, or are in the shape of human heads, and these also provide interesting materials for comparative study. Two exquisitely made crow pendants[9] of agate are well

1. Dikshit, M.G., *op. cit.*, (1952), p. 39.
2. Sharma, P.P.P., 'Aspects of Early Trade in the Gangetic Valley with Special Reference to Recent Archaeological Excavation, (unpublished) paper read at the Seminar held at the Tata Institute of Fundamental Research, Bombay in the year 1972.
3. Sinha, K.K., *op. cit.*, (1967), p. 61.
4. Beck, *op. cit.*, (1941), pl. I, 13-20.
5. Sankalia H.D., *et al.*, *op. cit.*, (1960), fig. 168, 3.
6. Marshall, *Taxila*, Vol. I, p. 103.
7. Beck, *op. cit.*, (1941), pp. 23-25.
8. Narain and Singh, *op. cit.*, (1977), pl. I, 11, p. 22.
9. Narain and Singh, *op. cit.*, (1977), pl. VIII, 2, 3, pp. 52-53.

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comparable with the similar shape in carnelian found at Taxila[1] and datable to 1st Cent. A.D. Similarly a pendant representing a bird[2] also shows close similarity with the bird of shell from Taxila,[3] datable from the 1st to 5th Cent. A.D.

In addition to these, tortoise pendants,[4] one each of blue glass and shell, have close counterparts in representations of tortoises in glazed quartz and green faience reported from the contemporary levels of Taxila.[5] The close similarities in all the above cases suggest common origin of the objects, and, therefore, of the possibility of contact by trade. Similar inference can be drawn also on the basis of the unique crystal pendant in the form of a female head (see pl. III, B) which, according to Motichandra,[6] is datable to C. 2nd—1st Cent. B.C. Exactly identical pendants in the same material have also been reported from Bhita[7] and Sonpur.[8] Marshall dated the Bhita specimen to the Gupta period, but that has been doubted,[9] the other pendant comes from the Period II of Sonpur, ascribable to C. 600 B.C. to 200 B.C. The three specimens are likely to have dispersed from a common centre, probably by way of trade.

Among other objects, of the Period III which lend themselves to fruitful comparisons and suggest possibilities of trade contacts, mention may be made of a copper finger ring with flat bezel without any decoration, (see pl. XXXI, 7) as similar finger rings have also been reported from Taxila[10] from a corresponding level. Then, the fragmentary ivory picture-frame, (see pl. XXXII, B) to which a reference has already been made, closely resembles the picture frame of the same material reported from Rairh. Similarly, as we have discussed in the chapter on 'Utensils', a study of the Red Polished Ware and the Rouletted Ware indicates the possibility of commercial links of Varanasi with western Indian sites on the one hand and eastern India on the other.

Besides the above, we have the very interesting and significant evidence of the terracotta sealings showing foreign motifs. Several of these sealings have been discovered and they are datable to *Circa* second or third Cent. A.D. They bear Graeco-Roman devices such as figures of Nike, Pallas, Apollo, Herakles, and busts of

1. Beck, *op. cit.*, (1941), pl. VII, 15.
2. Narain and Singh, *op. cit.*, (1977), pl. VIII, 7.
3. Beck, *op. cit.*, (1941), pl. VII, 19.
4. Narain and Singh, *op. cit.*, (1977), pl. VIII, 9, 11.
5. Beck, *op. cit.*, (1941), pl. VIII, 22, 23, 24.
6. Motichandra, *Kāśī kā Itihāsa*, fig. no. 4.
7. *ARASI* 1911-12, pl. XXXII, 9.
8. *IAR*, 1961-62, pl. IV, A, p. 4; also Sinha, B.P., 'Crystal Human Figure from Sonepur, *Purātattva*, No. 2, 51-52, pl. IX, B.
9. Agrawala, P.K., 'Three Crystal Pendants of Identical Design', *Purātattva*, no. 2, pp. 49-50.
10. Marshall, *Taxila*, Vol. II, p. 646. Specimens with plain bezel are found at Taxila from Bhir and Sirkap and range in date from 4th Cent. B.C. to 1st Cent. A.D.

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kings,[1] and some of them also bear string marks on the back. Here it may be mentioned that Taxila also has yielded sealings bearing the figure of Nike,[2] a few intaglios with the Indo-Greek coin-devices, such as figures of Athena[3] and Nike,[4] and other Graeco-Roman figures[5] and royal busts.[6] The resemblance between these figures and those of Rajghat is remarkable.

Certain sealings from Niya in central Asia, bearing similar Graeco-Roman devices and datable to the second-third centuries, also show similarity with the Rajghat sealings.[7] These considerations strongly suggest that Varanasi had commercial contacts with Taxila and Niya. The fact that the evidence comes from sealings which were apparently used to seal trade-goods and still retain string marks on the back further supports the inference. As it has been suggested, Taxila was a meeting place of three high roads, *viz.*, from eastern India, central Asia and from Bactria and beyond.[8] It may be that Varanasi was connected by trade with the Graeco-Roman world in the west mainly through Taxila. We have suggested this possibility also earlier in the context of the lapis lazuli trade.

In the context of the present discussion of possible trade contacts of Varanasi with the Graeco-Roman world, it is appropriate to mention that certain Roman sites have yielded ivory objects of Indian origin, and it has been suggested that Varanasi might have been the source of at least some of them.[9] Since, as we have seen, the *Jātakas* refer to an ivory-carvers lane in the city, thus suggesting a thriving industry, and there is also some archaeological confirmation for it during the various periods of our study, the above suggestion may not be very wide off the mark.

For the Period IV, there is a general dearth of the kind of material that was utilized to imagine trade contacts with various places during the preceding periods II and III. Perhaps it indicates a decline in long distance trade. But if there was any decline, it could not have been considerable. It may be recalled that the argument based on the sources of raw materials, like various precious and semi-precious stones and ores of metals, is just as applicable for this period, as it was for the preceding ones, to imagine contacts by way of trade with central Asia via Taxila,

1. Deva, Krishna, 'Coin Devices on Rajghat Seals,' *JNSI*, Vol. III, pp. 73, ff.; also Thaplyal, *op. cit.*, (1972), pp. 243-245.
2. Marshall, Taxila, II, p. 682, III, pl. 207, no. 29.
3. *Ibid.*, II, p. 650, no. 71, III, pl. 207, no. 10f.
4. *Ibid.*, II, p. 650, III, pl. 207, no. 10, b and g.
5. *Ibid.*, II, 650, III, pl. 207, no. 10, c, d and e.
6. *Ibid.*, II, p. 650, no. 72, III, pl. 207.
7. Motichandra, *Kāśī kā Itihāsa*, p. 58, see also Thaplyal, K.K., *op. cit.*, (1972), p. 244.
8. Thaplyal, *op. cit.*, (1972), p. 245.
9. Vogel, *ABIA*, XII, pp. 1-5, pl. I, 1-4, and Basham, *The Wonder That was India*, p. 229, pl. LXXXVII, as cited in Thaplyal, *op. cit.*, (1972), p. 245.

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the regions of the Bay of Bengal and parts of Bihar, Orissa and Uttar Pradesh. In any case, the positions of the various crafts and industries during the period, as surveyed by us earlier, suggests more or less the same degree of prosperity as is noticed during the preceding period. If the number of objects of various types is comparatively less for which, incidently, there may be other explanations like the shorter time of the period, *etc.*,—there is also on the other hand greater sophistication and superior workmanship in many cases and also introductions of new tools and objects. We have also the evidence of the massive underground structures, bearing ample testimony to the rich trade activities during the period.[1]

From the above discussion, we may conclude that the material remains of the Period I on the whole clearly reflect its village character. The economy of these early settlers was primarily agro-pastoral, supplemented partly by hunting and some specialized crafts like pottery, smithy, textile, and making of bone-tools. Items of luxury, which characterize the succeeding periods, were lacking, and the limited—trade was carried through barter.

A change is clearly noticeable towards the beginning of the Period II. We now see sufficiently increased activity in the fields of agriculture, crafts, industries and professions. Agriculture and animal husbandry were the mainstay of the economic life of the people. The presence of rice and wheat, or barley shows the knowledge of the double crop system, *i.e.*, the *rabī* and *kharīf*, which is a distinct advance in agriculture. Besides, occupations like hunting, slaughtering of animals and fishing continued to prosper. Other crafts like pottery making, clay-modelling, carpentry, smithy developed substantially. There is, however, an indication that there was a decline in the demand of special kind of vessels like NBP Ware towards the late phase of the period. There are indications of much development in certain industries mainly connected with the urban life, such as textile, ivory, cosmetics and

1. Cf., Sharma, R.S., *op. cit.*, (1966), pp. 85-86, 88; and by the same author, 'Decay of Gangetic Towns in Gupta and Post Gupta Times', *Proceedings of the Indian History Congress*, 33rd Session, Muzaffarpur, 1972, pp. 92 ff; and 'Problem of Transition from Ancient to Mediaeval in Indian History', *The Indian Historical Review*, Vol. 1, no. 1, March, 1974, pp. 1ff. also see by the same author, *op. cit.*, (1983), pp. 156-157. Sharma's suggestion is that with the disruption of the Kushāṇa empire, long distance trade generally declined during the Gupta and post Gupta times, which led to the decline of urban centres in the Gangetic basin. He has tried to substantiate his opinion by examining the many excavated sites of the Gangetic basin, including Rajghat, while this is not the appropriate place to examine Sharma's thesis in any detail, and we have also not had the opportunity to study the materials of the other sites as closely as he has done, we feel that at least the Rajghat material does not fit his thesis in so far as the decline during the Gupta period is concerned. To the various indications of continued prosperity during the period that we have noted above, it may be added that, generally speaking, there is no suggestion of decline in structural activity. In fact, we have evidence of larger, and impressive structures in this period than in the preceding one.

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perfumary. The other important development, though on a smaller scale, was the beginning of the glass industry.

The various items of luxury show the prosperity of the period. Of the actual ornaments, mention may be made of bangles, variously made of copper and terra-cotta, copper finger rings, dises made of semiprecious stones and probably used as ear ornaments, and a variety of beads and pendants of different materials. The toiletry and other objects include copper antimony rods, combs of bone, terracotta flesh rubbers, shale designer for executing designs on the body and copper ear cleaners. The manufacture and use of luxury items apparently went hand in hand with the development of the urban life. The prosperity of this period must have came in the wake of the widespread use of iron. The miscellany of iron objects include agricultural implements, craftsmen's tools, weapons and other domestic articles, thus suggesting its wide application. The extensive use of iron is clearly suggested by the finds of 175 objects and slag (see chart 4).

The period is marked by the advent of money economy. Trade relations are indicated with distant places like Śrāvastī, Taxila, Ahichchhatrā, parts of Bihar and eastern India within the country and outside it, with Badkshan. A significant evidence of trade activity of the period is the construction of the wooden landing along the course of the river Ganga for loading and unloading of the merchandise.

The beginning of the period III showed further growth in the various crafts, industries and occupations of the preceding periods. Besides agriculture and animal husbandry, mining and smelting became important occupation. The occurrence of a variety of objects and a measure of standardization in them indicate further advance in other industries and their manufacture. An important development of the period was the location of industrial workshops with in the precincts of the city, which might have been located outside the township in the earlier period, as mentioned in the Buddhist texts. This is borne out by the existence of three large blacksmith's furnaces on the mound 1. It is possible that the people engaged in this profession, lived and worked in an exclusive area of the settlement near the river front. The industries connected with the luxury items, such as glass, bead, ivory cosmetics and perfumery, particularly the first two, seem to have come into still greater prominence. It is interesting to note that in bone and copper also the frequency of luxury items increased. The bone objects comprised mostly comb, dice, disc, handle, terminal, *etc.*, while in copper, besides bangles and finger rings, the antimony rods formed the largest number. As in the preceding period, the luxury ornaments consisted of bangles and rings, but they now show a range of new variety, standardization in production and comparative higher frequency. Besides copper and terracotta bangles, shell and glass were also employed for this purpose. It may be noted that it is particularly the late phase of this period that has yielded the largest number of toilet objects like antimony rods, skin rubbers, combs, casket

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lids, *etc.* The institution of guilds, which was introduced in the preceding period, seems to have been further developed and commercial activity was intensified. Trade with places within India already referred to for the preceding period developed further, and new trade contacts were established both within the country and outside it. The trade relations with central Asia and the Graeco-Roman world gave a phillip to the growth of industry by opening new markets, and aided overall increase in the wealth. The above study shows in brief that the period witnessed simultaneously increased economic prosperity, and full-blooded growth of urban life. The two developments were inter-related.

The people belonging to the Period IV also seem to have depended chiefly on agriculture. Apart from any other possible use, the underground structure of the period seem to have mainly served as stores for food-grains and this further strengthens the above assumption. It also leads to infer that the agricultural society of the Period produced enough surplus, which was not only kept for future consumption but also transported to different places to be sold for profit. Food-grains, thus, were a very important item in the city's wealth and their trade must have contributed to the economic prosperity of the people of this period.

In the field of crafts and industries, the distinctive feature of the period is standardization and further sophistication of the objects manufactured and introduction of new tools and objects. Of particular interests are ivory, bead and glass-making industries. The pleasing colour combination of the glass beads and bangles, the finely made and delicately carved specimens in ivory, beads, and pendants of semiprecious stones and other materials go to suggest the popularity of the luxury goods. The use of cosmetics and perfumery seem to have been as known as in the preceding period. The luxury items manufactured in copper, *viz.*, bangles, rings, armlets, antimony rods, tooth picks (?), *etc.*, are also of high order. Shell industry also came into existence during the period and produced items of luxury.

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Appendix

(A note on industry and trade of Varanasi as mentioned in the Buddhist Texts.)

Varanasi was a great centre of trade and industries and trade-relation existed between it and such Indian cities as Rājagṛiha,[1] Śrāvastī,[2] Taxila,[3] *etc.* Merchants of Varanasi used to go Ujjain[4] in order to carry on trade. The Buddhist literature mentions of caravans leaving Varanasi on long travels for trade. A merchant of Varanasi went to a frontier country with 500 carts and purchased sandal wood.[5] Similarly, another merchant travelled to Śrāvastī with 500 carts full of red cloth, and as he could not cross the flooded river, he disposed his goods nearside the river.[6] The *Taṇḍulanāli Jātaka*[7] mentions an interesting story of a horse dealer who came to Varanasi from Uttarāpatha with five hundred horses. Similarly, the *Apaṇṇaka Jātaka*[8] mentions the movement of a caravan leader of Varanasi who goes from east to west and from west to east with five hundred carts. Another Jātaka[9] informs that the Bodhisattva was born in a caravan family (*satthavāhakule*) in Varanasi. He used to move with 500 carts for trading, and while travelling, he once reached in a desert the sand of which was very fine. Due to the lack of geographical description it is very difficult to identify the place. However, Motichandra[10] surmises that it may have been the desert of Marawar or Sinda. The Bāveru Jātaka tells us that some merchant of Varanasi set out on a sea voyage to Babylonia.[11] Since the merchant is said to have left through the port of Bharukachchha, the voyage was apparently performed through the Arabian sea and the Persian gulf.[12] Similarly *Chatu-Dvāra*-Jātaka also informs about sea voyage undertook by a

1. *Vinaya* I, 212, as cited in Law, B.C., *Tribes in Ancient India*, p. 112.
2. *Ibid.*
3. *Dhammapada* comm, III, 445, as cited in Law, B.C., *Tribes in Ancient India*, p. 112.
4. Cowell, Jātaka no. 243.
5. *Suttanipāta* comm., Vol. II, pp. 523 ff. as cited in Law, B.C., *Tribes in Ancient India*, p. 112.
6. *Dhammapada* comm., Vol. III, p. 429, as cited in Law, B.C., *Tribes in Ancient India*, p. 112.
7. Cowell, Jātaka no. 5.
8. Cowell, Jātaka no. 1.
9. Cowell, Jātaka no. 2, also fausböll, Vol. I, p. 107.
10. Motichandra, *Sārthavāha* (Hindi), p. 60.
11. Cowell, Jātaka no. 339.
12. Motichandra, *Trade and Trade Routes in Ancient India*, p. 60.

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wealthy merchant of Varanasi.[1] The commercial relations of Varanasi with Suvarṇabhūmi is attested by *Saṅkha Jātaka*.[2] We are told in the *Chullaka-Seṭṭhi-Jātaka*[3] that merchants also voyaged from other places to Varanasi.

1. Cowell, Jātaka no. 439.
2. *Ibid.*, Jātaka no. 442.
3. *Ibid.*, Jātaka no. 4.

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10

Conclusion

An attempt was made in the preceding chapters to discuss in detail some of the patterns of life of the ancient people of Varanasi. The present chapter, on the contrary, is intended to depict a coherent picture of the life at ancient Varanasi through the ages, by incorporating the essentials of all the cultural traits, detailed in the preceding pages. Besides, a short discussion on the religious beliefs and practices of the people during different periods is also being added with a view to making the picture more complete. Although it is primarily based upon the evidence discussed in the previous chapters, and some repetition is, thus, unavoidable, this chapter differs fundamentally from the earlier ones in respect of the treatment of the subject. It is worthwhile to recall here the limitations of the source material referred to earlier in the Chapter I and the others. These limitations also come in the way of presenting a period wise integrated account of the life of the people of this ancient township. Since the excavations at the site did not cover similar area for all the periods, our information about some of them is naturally meagre and limited to a few details only. Under these circumstances, it is obvious that some unavoidable gaps are left in this historical account, which we propose to present in the following pages.

Period I

The available archaeological evidence do not push the history of Varanasi farther than Circa 800 B. C., though the literary tradition contained in the Purāṇas and some other works[1] will make us believe that the history of this township goes back to a hoary past, much before the time of the Buddha. According to the excavations at Rajghat, the place was first occupied around 800 B. C. and the culture of these earliest settlers continued almost unchanged for about two hundred years. The fact that the remains of the Period I were not encountered in all the trenches laid in different parts of the site, clearly shows that the population at Varanasi at that time was comparatively smaller and the settlement was restricted to a small area, close to the rivers Ganga and Varuna, Since a very limited area

1. For details, see Chapter I.

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of this period was unearthed, it is rather difficult to give details of the day to day life of the people. There is hardly any evidence for the precise nature of their settlement. In the absence of any mud brick or mud constructions, it may be presumed that they made small thatched huts for the dwelling purposes, although actual post holes had never been noticed in the excavations. Similarly, our information regarding the dresses of the people is nil, as the only terracotta figurine found in the closing phase of the period also does not indicate anything worth consideration. However, there are some bead like terracotta specimens which have been identified as spindle whorls. If this proposed identification is correct, we can presume the existence of some rudimentary textile industry during the period. This obviously leads us to another presumption that some type of clothmade dresses were worn by the people. The same terracotta figurine of the archaic Mother Goddess also indicates a girdle round the waist. This evidence and the presence of a few actual specimens of beads, some crude disc-shaped ear ornaments, and a fragment of a copper bangle suggest that the people were wearing some such less sophisticated ornaments which are still in use among some aboriginal tribes, inhabiting remote areas of the world. The beads and the ear ornaments are variously made of terracotta, bone and cryptocrystalline silica.

The above reference of some of the cultural traits of the Period I will indicate a preliminary stage of development. However, some of the achievements, particularly in the field of pottery making and metal technology, will certainly place the people of this period in a little higher economic status. They made as many as four different types of pottery, *viz.*, the black slipped, the black-and-red, the grey and the red wares. Some of the beautifully made deluxe utensils among the first three types are certainly the examples of the high quality of workmanship, achieved by the people in this craft. Besides, they had already reached a fairly high stage of efficiency in iron technology, as is evident by the occurrence of some iron implements. They were also making occasional use of copper. One of the copper objects has been identified as an antimony rod, and, if this object was actually used for the same purpose which is generally assigned to the antimony rods, we have an evidence for the toilet activities of the people, an aspect which is generally associated with the luxurious way of life.

What were the basic features of the economy of the people of this period ? In view of the limited nature of the evidence, it is indeed difficult to answer this question precisely. Among the metal objects, none can be identified as an agricultural implement. This factor and the fact that no actual example of cereals has been unearthed from the site lead us to the probable conclusion that the farming did not constitute the basis of their economy. However, the people, at the same time, were not entirely ignorant of agriculture, as indicated by the presence of some rice husk in the ordinary red ware pots. The suggestion is further strengthened by

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the presence of a few large sized pots, presumably meant for storing food grains. It is rather interesting to note that out of the five animal species occurring in this period, as many as four belonged to the domesticated variety. This factor will go in support of their being cattle keepers. Among the four domesticated species, the two are the milch animals (cattle and buffalo), and the remaining two (pig and sheep) presumably meant for butchery. The skeletal remains of the spotted deer may indicate that the economy was partly sustained by hunting. The occurrence of various bone points also goes in support of the above supposition, though there is some evidence to suggest that such implements were primarily meant for shooting birds.[1] Thus, the above discussion may imply that the people of the Period I had primarily a pastoral economy, supplemented by incipient farming and hunting, which is not quite unknown even among the present day tribal communities. Since the habitation was situated very close to the rivers Ganga and Varuna, it appears reasonable to presume that a section of the community also practised fishing, though there is absolutely no archaeological evidence to confirm this presumption.

Many of the items unearthed at Rajghat seem to involve a certain degree of specialization in their manufacture. In this respect mention may be made of the antiquities like various types of earthen wares, particularly the well finished decorated deluxe pots of the black-and-red and the black slipped wares, and the objects made of copper and iron. These could have been the two industries in which some sections of the society would have been fully engaged. The existence of some other similar industries cannot be altogether ruled out. There is no evidence to determine whether any industrial, agricultural or other products were also traded to other communities. If there had been any such economic transaction in existence, it must have been of a very limited nature, based on the primitive practice of barter.

The above account appears sufficient to indicate that the culture of the Period I at Varanasi had basically a rural character with essentially a primitive pastoral-cum-agricultural economy, supplemented by hunting and some minor crafts and industries. Unless one over-emphasizes the importance of the occurrence of metal technology, it is hard to find even the germs of urbanization in this period of the history of Varanasi. The simple folks of the Period I probably worshipped the Mother Goddess, as is evident by the lone terracotta figure having archaic characteristics. It may be recalled that the religious beliefs, related to the cult of fertility, have been in vogue in many of the primitive cultures of the world, and the practice most probably started during the closing stages of the Palaeolithic Period.[2]

1. *Supra*, Chapter IX.
2. Müller-Karpe, Herman., *Handbuch der Vorgeschichte*, Erster band, München (1966), pp. 249 ff.

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Period II

The beginning of the Period II roughly coincides with the establishment of the sixteen *mahājanapadas*. As gathered from the several references in ancient Indian literature, Kāśī was one of the important *mahājanapadas*, of which Varanasi was the capital city. Thus, according to the literary evidence, Varanasi was an important urban centre of northern India from sixth century B.C. onwards. If the modern concept of urbanization, which underlines the significance of economic factors in the make-up of an urban centre, is to be considered as a basis for discussion, Varanasi will hardly deserve a label of the city, in view of the archaeological data unearthed from Rajghat. However, references to the cities in early Indian literature also make it abundantly clear that most of the urban centres of the time of the Buddha were primarily the seats of political power, as almost all of them were the capitals of one or the other state. It may not be, thus, unreasonable to infer that an ancient Indian city, at least up to the middle of the first millennium B.C., was first a centre of political authority and it was only subsequently that it achieved economic significance by way of developing industries, crafts, other means of production, trade, *etc.* In fact there appears to be a strong case for reexamining the whole problem of urbanization in ancient India in the light of the ancient Indian concept of a *nagara* or a *pura*, which might have differed fundamentally from the present day idea of an urban centre. It is interesting to recall that among the various features of a *nagara*, referred to in the literature, it is the defence system in the form of a rampart (*prākāra*) and a moat (*parikhā*), which have been invariably mentioned in the description of various ancient Indian cities. This appears quite logical to infer that in a capital city, inhabited by the main political authority and his important officials, what was needed most was a suitable defence system. If the above reasoning is accepted, Varanasi was already in a preliminary stage of urbanization in the very beginning of the Period II, as the excavations clearly revealed that both the rampart and the moat were added to the habitation as early as in the sixth century B.C.[1]

Apart from the rampart and the moat, there was nothing particular by way of structures during both the phases of this period, which could provide Varanasi an urban character. The burnt brick constructions were altogether absent, and the evidence unearthed in the form of a one example of a mud wall of the late phase, fragments of earth plaster with reed impressions, and the sporadic post holes

1. Various points about urbanism in ancient India, contained in this chapter, have emerged from our discussion, which we had with Dr. P.C. Pant, Reader in the Deparment. In fact, he proposes to reexamine the whole problem of urbanism in the light of both literary and archaeological sources. For his preliminary observations, see, Pant, P.C. & Misra, Manta, 'Concept of Nagara in Ancient India and its Bearing on Archaeological Evidence', *Bhāratī*, Banaras Hindu University, Varanasi, 1984.

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indicate that the inhabitants built only small huts for residential and other purposes. Whether these structures were constructed in accordance with any well thought plan is not clear from the few excavated remains. However, they were at times separated by some mud streets, and the inhabitants appeared to be particularly conscious about their sanitary requirements. The evidence for a *Kachchā* drain and a number of soak pits and privies, sometimes lined by terracotta rings, particularly in the late phase, go in support of the above assumption.

The Period II marks an overall increase in the number and variety of antiquities over those of the preceding one, though agriculture and animal husbandary, still seemed to be the mainstay of the economic life of the people. If the number of domesticated animal species represented in the two phases of this period is any guide, it may be presumed that the animal husbandry was fast, developing, and it had perhaps taken the form of an industry. The animals were domesticated both for milk as well as butchery. The economy was further supplemented by hunting and perhaps also by fishing. In fact the maximum number of wild animal species has been represented in the first phase of this period, indicating thereby a marked increase in hunting activity.

The overall economic prosperity of the period was perhaps the result of gradual industrialisation, which finds enough corroboration also from the Buddhist literature.[1] The degree of perfection achieved in the manufacture of different items like ornaments made of copper, semiprecious stones and terracotta, a large number of iron and copper objects, some ivory objects, glass beads, and above all the lustrous pots of the NBP Ware, of which Rajghat appears to a treasure-house, is the evidence which supports the above supposition. It is quite likely that each one of them was a fairly developed industry, which was probably practised by a group of families from generation to generation. According to the Buddhist literature, all these industries were developed in the suburban villages, surrounding ancient Varanasi, though a few of them like that of ivory objects might have been located within the precincts of the habitation. According to literature, Varanasi was one of the most important industrial centres of textile, cosmetics, and perfumery. Archaeology, however, neither supports nor rejects this literary observation.

There are several references in ancient Indian literature, which establish beyond doubt that Varanasi during this period was also a great trading centre, exporting its numerous industrial products to different parts of the subcontinent, as well as, the distant countries like Babylon and Suvarṇabhūmi.[2] The archaeological evidence seem to support this description only partially. First, there is enough indication in the form of numerous stone beads in different stages of manufacture to suggest that there was a flourishing bead industry in the township. The specimens similar to

1. For details, see Chapter I and IX.
2. For literary references see Appendix at the end of Chapter IX.

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those manufactured at Varanasi have been reported also from some other sites of the Gangetic valley, which have not revealed any evidence for their local manufacture. Can it be inferred from the above that all these centres imported stone beads from Varanasi ? Second, it is the evidence of the wooden planks fixed on the southern boundary of the habitation on the river front of the Ganga. Disagreeing with the excavators, we proposed in the Chapter II that the platform erected with the help of wooden planks was in fact a halting place for the loading and unloading of mercantile boats. It is natural to presume that the ancient sites, located on the banks of the big rivers performed their trade activities also through the river routes. Like many of the ancient sites of eastern Uttar Pradesh and Bihar, Varanasi was also an important manufacturing centre of the deluxe NBP Ware. The superfine pots of this pottery were perhaps exported to other distant cities, as is also evident from some of the references, contained in the Buddhist literature. However, this proposed trade link must have been of a limited nature in the early phase of the Period II, for it is difficult to presume the existence of brisk trade without any standardised medium of exchange; the actual evidence for coins comes only from the late phase.

The all round economic prosperity, acquired through multifarious industrial and trade activities, probably led the people to use some items of luxury in their day to day life. The number and the variety of toilet accessories show an increase in the Period II, particularly in its late phase. Similarly the people seemed to have worn different types of ornaments and dresses. The late phase is again more important in respect of these two also. Though there is no direct evidence, yet, considering the large number of shapes in the earthen wares including the ones presumably used for cooking and eating purposes, it may probably be suggested that their food habits had now undergone some change and many new dishes were added to their diet.

The brief discussion on the patterns of culture of the inhabitants of Varanasi may indicate that the period marked a noteworthy development in the economic spheres, leading to an overall prosperity of the habitation. However, leaving aside the rampart and the moat there was no sign of urbanization either in the structures or in the planning of the habitation. It is noteworthy that the burnt brick structures, constructed in accordance with a definite plan, made their appearance earlier at several sites of the Gangetic valley than at Rajghat. Can it be due to the fact, as gathered from the literary tradition, that ancient Varanasi lost its political importance earlier than most of the other capital cities ? If the answer of the query is affirmative, a comparatively slow development of this habitation will appear somewhat justified. As far as the religious practices are concerned, they hardly marked any change during this period. As in the preceding period, the people seemed to have still worshipped the Mother Goddess, a symbol of the fertility cult.

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Period III

This period marks a further rise in the economic prosperity of Varanasi, as evidenced by the occurrence of a very large number of antiquities, representing not only the varied needs of the people but also their developed aesthetic sense. The modest beginnings made by the people in the economic spheres during the preceding period now received a sudden boost, particularly in the late phase of the Period III, resulting in all sided development in the life of inhabitants. From the point of view of the political history, it was a period of foreign invasions and the establishment of the rule of some foreign powers like Indo-Greeks, Indo-Scythians, Indo-Parthians and Kushāṇas, in parts of northern India. As a result, the Indian sub-continent came in direct contact with the western and central Asian way of life, and obviously this might have resulted in acculturation of the Indian society. Moreover, around the beginning of the Christian era India established a direct trade relationship with the Roman empire. All these political and cultural contacts with the foreign people must have influenced the Indian way of life and new patterns might have emerged in the cultural set-up of the sub-continent. Varanasi certainly experienced some of these new cultural influences, as is indicated by the occurrence of some Indo-Roman sealings with figures of Apollo, Heracles, Nike, Pallas, *etc.*, and a few terracotta figurines, depicting dresses and coiffure, presumably of foreign origin. To what extent did these foreign influences help Varanasi acquiring the many sided prosperity, cannot be precisely determined on the basis of the available data.

After the downfall of Varanasi as a seat of political power, it is logical to surmise, the inhabitants of this township appeared to have drawn their attention to the economic development. The crafts, industries and some occupations which were initiated in the earlier phases showed an unprecedented growth during this period, as attested to by the evidence of archaeological remains unearthed from the site. Agriculture and animal husbandry, the mainstry of the economic structure of the earlier period, perhaps continued to play the same role in the community life. There is evidence to suggest that they were now better organised. This appears to be particularly true in the case of the latter, as indicated by the presence of the skeletal remains of such domesticated species as cattle, goat, sheep, pig, horse, camel, *etc.*, and the occurrence of a sealing reading '*Gavayāka seniye*' (of the guild of milkmen). In the sphere of agriculture, the presence of the actual specimens of rice and wheat indicates that the people were harvesting two crops in a year. The occurrence of the skeletal remains of rat and a large number of big storage pots, as well as a barn, may suggest high yield of the cereals and their hoarding in various houses. On the industrial front the growth was certainly more marked. The inhabitants of Varanasi made remarkable progress in the industries connected with the two metals—copper and iron. This growth is sufficiently indicated by the presence of a large number and variety of objects made

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of copper and iron, and the occurrence of slags of the latter, as well as three large-sized furnaces, most probably used for iron smelting. The evidence also indicates that a section of blacksmiths was settled inside the habitation, probably in an exclusive area close to the river Ganga. Similarly the stone and glass beads show a marked increase in the number and variety, and, in the case of the former, there are many examples of unfinished specimens. Besides beads, the glass was now also used for making bangles. It appears that these and the other several big and small industries, as well as the crafts, sustained a large part of the economy of this urban centre. Many of the industrial products, particularly the stone beads and probably also the iron objects, were perhaps exported to the different parts of the country, and in turn some of the items, more particularly the raw material for beads and metal objects, could have been imported from the nearest available sources. There is every likelihood that during this period Varanasi strengthened its trade relationship with central Asia and established new commercial ties with the Graeco-Roman centres. Thus, from the economic point of view, Varanasi was now fully urbanised.

The urban character of Varanasi is also reflected by the sudden increase in the luxury goods, including the toilet accessories, ornaments and varied dresses, worn by different male and female terracotta figurines. Among the numerous toilet accessories, objects of entertainment, and various ornaments, a few, made of bone and ivory, were also delicately carved, giving expression to the aesthetic feelings of the period. The evidence of the terracotta figurines, if accepted without reservation, suggests the prevalence of a very large variety of ornaments, aesthetically arranged coiffure, and various beautiful dresses, sometimes made of delicate diaphanous and profusely embroidered cloth. All these items depict a picture of the luxurious city life.

The Period also marked the beginning of the burnt brick structures, although they seem to occur a little earlier at several other sites of the Gangetic valley. The most striking feature of the structures appears to be that they were built according to a well conceived plan. Although only a small area of the site of this period was actually laid bare during the excavations, it is abundantly clear from the evidence that the planning was not limited to the residential houses alone, but it appeared to have covered the layout of the entire town complex. Thus, even in the structures of the early phase of the Period III, one notices a sort of regularity in constructions, as the houses were mostly built in a row, at times separated from each other by an open space or a lane. These residential constructions had a simple plan of two or three rooms only, though they were at times provided with such amenities as domestic brick built wells, and drains. The inhabitants appeared to be particularly conscious about the stability of the buildings, as is evident from their elaborate foundations, containing a layer of rammed brick-bats and plinth. The houses were roofed by tiles. The tradition of these simple residences continued even in the late phase of the period. But, a new variety of houses also came into existence during

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this phase. These buildings had elaborate plans, comparable to the *dviśāla* and the *triśāla* complexes, referred to in literature. Built on a rectangular plot, they invariably had a courtyard either in the centre or towards a corner, but the rooms in all the cases opened in the courtyard. Obviously, there was a larger number of rooms in such buildings, which usually also contained some additional amenities like bath room, kitchen, well-room and store. What appears to be most striking during the period is the elaborate sanitary device, which included brick lined private and public drains, and various forms of soakage pits. The massive public drain number 2, added to the city complex in the late phase, deserves special mention in this regard. A new variety of soakage pit, containing big jars with pierced bottom, was introduced during the early phase of this period.

Another noteworthy feature of the period appears to be the shift of population from the neighbouring areas to the main town. As already mentioned in the earlier chapters, the Rajghat site contains three mounds, and all the three were simultaneously inhabited during the Period II, though the mounds '1' and '3' were also occupied in the preceding period. However, during the period under discussion, the mounds '2' and '3' were altogether abandoned, and the habitation was limited to the main mound only. Taking into consideration the implications of this evidence and the fact that most of the structures were built close to each other in the main township in the Period III, it appears quite logical to presume that, with the growth of multifarious economic activities, the artisans and craftsmen of the neighbouring localities shifted naturally to the city. All the available evidence suggest that the town was now much more densely populated than during any of the preceding periods.

The above discussion is sufficient to indicate the full fledged growth of Varanasi as a flourishing urban centre. The occurrence of the *śreṇi* and the *nigama* sealings is a further proof of the fact that the various economic activities had now grown to the extent that they had to be organised within different economic bodies. The remains of the residential buildings of various sizes are the evidence for the existence of different economic classes in the population. These and the other structural features, like the town planning and the sanitary devices, are ordinarily accepted as normal features of any urban complex.

A marked change was also noticed during the period, particularly in the late phase, in the religious practices of the inhabitants. Varanasi, it appears, now could not escape from the growing influence of the Buddhism, as it is apparent from a few sealings, which are definitely Buddhist in their content.[1] One of them contains the legend '*Bhisakavihāre therasa bhikhusanghasa*', and the other two read '*Bhagavato Sitasa*' and '*Buddhasya*', all in Kushāṇa character.[2] It is quite likely

1. Motichandra, *op. cit.*, (1962), p. 76.
2. *Ibid.*

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that the above sealings might have been actually issued by certain Buddhist organisations of Sarnath, which is only about five *km.* north of Rajghat. However, their occurrence in ancient Varanasi may lead us to an obvious conclusion that at least a section of the population was attracted by the teaching of the Buddha. Besides, it is during the late phase of this period that the Śaiva cult seems to make its modest beginning. This conclusion is also based upon the evidence of sealings. The Śaiva sealings, however, did not exist in such a large number as the Buddhist ones. Three sealings of Rajghat, now housed in the Bharat Kala Bhavan, bear the bull and the trident symbols of the lord Śiva, while one of them also contains a legend '*Sahasya*' in Kushāṇa script.[1]

It may be, however, emphasised that the evidence of terracotta figurines, unearthed from Rajghat,[2] hardly confirm the prevalence of either Buddhism or Saivism, and, according to these most of the population still continued to practise folk religions. All the religious figurines of the early phase are those of the Mother-Goddess, differing from the specimens of the preceding periods only in minor details. During the late phase appear some fragments of votive tanks, with birds perched on corners and suspected flight of steps on one of the sides, some star shaped female figurines supposed to be associated with the cult of the Mother-Goddess, and a few specimens of the goat faced god Naigameśa, all reflecting the folk character of the religious beliefs. Thus, the inhabitants of Varanasi still maintained primarily their old religious traditions, though with some modifications, and they had been only marginally influenced by the growing religious movements of Buddhists and Śaivites.

Period IV

It mostly covers the Gupta period, variously acclaimed by the historians as the classical age or the golden period of the Indian history. A section of scholars now thinks that the golden nature of the period was limited to the achievements in the fields of art, literature, science, *etc.*, and,with the decline in urbanism,[3] the prosperity of the general masses also went down during this period. This observation is said to have been based upon the archaeological remains unearthed at the various sites of the Gangetic valley. The Rajghat evidence, however, do not support the above thesis. The excavated remains of the period from the site prove beyond any doubt that Varanasi was at that time at least equally prosperous, if not more, as in the preceding period, and there was certainly a marked improvement in the sophisticated and aesthetic outlook of the people.

1. Thaplyal, K.K., *op. cit.*, (1972), p. 138.
2. Narain, A.K., and Agrawala, P.K., *Excavations at Rajghat*, pt. IV (A: Text), Terracotta Human Figurines, (1978), pp. 39 ff.
3. Cf., Sharma, R.S., 'Decay of Gangetic Towns in Gupta and Post—Gupta Times, *op. cit.*, pp. 92 ff.

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According to the Rajghat report, the structures were less frequent during the Period IV as compared to the preceding one.[1] However, we fail to share the view of excavators, as their observation was based upon the excavation of a comparatively small area. For reasons not known to us, the report altogether excluded the scores of structural remains of this period, exposed by the railway operations and the subsequent digging by Krishna Deva. During our clearance operations of 1977-78, we exposed quite a good number of structures of the Period IV, several of them being not only important for their structural features, but also for throwing valuable light on some of the cultural attainments of the people of Varanasi. What appeared to be the most striking feature of the structures of this period was their general massiveness, as if the people hated to be associated with any thing which was small. In fact the largest and the best planned building of Rajghat, covering an area of about 290 *sq. m.*, and containing as many as eight rooms and a pillared hall in the centre of the spacious courtyard, belonged to this period. Built in the *Chatuḥśāla* pattern, the structure obviously could not have been owned by an ordinary man. The common residential houses, however, did not differ fundamentally from those of the preceding period. But, it is noteworthy that almost all the buildings, whether big or small, had deep foundations and broad to very broad walls, measuring as much as one metre in width. The excavations also yielded evidence for two roads of different dimensions, one of them measuring as much as 5.76 *m.* in width and the other 2.70 *m.*, indicating thereby that the entire habitation was divided into various sectors by big or small roads and lanes, depending upon the relative importance of different localities. These roads were invariably flanked by various structures of different dimensions. The one room structures built in rows were found by the side of both the above roads, and, if our identification of these constructions with shops is acceptable, there is a clear evidence for the markets of this period. To sum up, the buildings of the Period IV appear to have had more grandeur than those of the preceding one, and by all standard the town had a perfect plan, with a developed sanitary device. It appears that how the sanitary problems of the inhabitants were looked after by the civic authorities, as is evident by the general absence of all the types of soakage pits, attached to individual houses, and the presence of two massive public drains. Similarly, the practice of digging wells inside the individual complexes was done away with, and was replaced by public wells, one of them being unusually massive, having an outer diameter of 7.76 *m.* and built in a stepped fashion.

Looking at all the multifarious structural activities of the period, it can be safely held that the best evidence in this regard was noticed in the form of numerous underground structures of various sizes. It may be recalled that similar structures have been reported from several other sites like Kauśāmbī, Kapilavastu,

1. Narain and Roy, *op. cit.*, (1976), p. 31.

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Fazilnagar (Deoria), Arikamedu, Khairadih, *etc.*, but the evidence from Rajghat is undoubtedly unsurpassed in the sense that no other site has so far yielded such a large number of underground structures concentrated at one particular strategic place, as at Rajghat. Considering the literary tradition, their location in a particular region on the river front, and the present day practices of some parts of northern India, we have identified their purpose as storage of various items, particularly grains, and the entire complex has been termed as 'Trade and Ware House Complex.' If our interpretation of the underground structures is correct, they add an entirely new dimension to the achievements of the people of Varanasi during this period. In view of the developed state of industries and crafts, flourishing agriculture and the occurrence of a large number of the underground structures, it is reasonable to presume that this place was a busy trade centre of northern India, transacting its business mainly through the river route.

Though the number of antiquities unearthed from Rajghat might be slightly less during this period as compared to the preceding one, they certainly excelled in their artistic execution and finish, as well as their standardised form. On the basis of the evidence provided by the antiquities, it may be surmised that most of the industrial traditions of the preceding period were more or less continued, and the ivory, stone bead, glass and metal industries particularly flourished during this period. Besides, the industry connected with the manufacture of various shell objects was introduced for the first time in the economic history of Varanasi. As emphasised earlier, a large number of items manufactured during this period, was of high aesthetic quality, suited to the sophisticated taste of the people, and may perhaps be referred to as luxury goods. How many of these were actually included in the items of trade, cannot be precisely determined, due to the lack of any definitive evidence. Yet, the wide prevalence of luxurious items is certainly an indication of the high prosperity of the place during the Period IV. Whatever, little evidence are available for the prevalent dresses, ornaments and coiffure, they are sufficient to strengthen the above observation.

As in the preceding periods, agriculture and domestication of animals still contributed substantially to the economy of Varanasi. Between the two, the former was particularly developed. If our interpretation of the underground structures that most of them, were used for storing grains, is taken as a guide, the place was undoubtedly a great centre of grains, exporting them to various distant and neighbouring regions. Whether the hunting was still included among the regular professions, or was merely a sport, cannot be said positively, though a fairly large number of iron arrowheads, unearthed from this period at Rajghat, certainly point out to its wide prevalence. However, the forests were definitely exploited for raw material and other forest products in a large scale, as it is evident from a sealing from Rajghat, which reads *Vārāṇasy-Āraṇyaka-śreṇi*, '(Seal) of the guild of the

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forest people of Varanasi.' In this context reference may also be made to a fairly good number of sealings bearing the legend '*nigama*' or '*negama*'. Many scholars connect the term with some sort of economic organisation, looking after the trade activities of the city.

Varanasi probably owed its prosperity, at least partly, to an efficient city administration. A good number of seals and sealings bearing inscriptions in Gupta character referred to various officials, sometimes along with the names of the persons holding the offices, who were variously engaged in the administration. Among them, those of different *amātyas*, like *amātya* Kapilaka, *amātya* Āryaśarmā, *amātya* Varadatta, *amātya* Soṇa, *amātya* Boṭa and *amātya* Janārdana far outnumber the other types.[1] What does the word *amātya* actually denote is hardly clear from the literary references. According to Thaplyal, the term probably stood for "a general class of officers who were assigned numerous duties and offices."[2] Besides, there are three sealings of *daṇḍanāyaka* Ahuttara, *daṇḍanāyaka* Sarva, and *daṇḍanāyaka* Satyavrata. The word *daṇḍanāyaka* has been variously interpreted as police officer, judge, army officer, chief judge or chief officer of police.[3] One of the sealings reads *Kumārāmātyādhikaraṇasya*.[4] The word *Kumārāmātya* had been differently interpreted by various scholars, but we feel that, in the context of the city administration, he must have been the chief officer supervising the work of other junior officers. A lone sealing, bearing the legend *Mahāsenāpatisya Rudramaghasya*, seems to pose some problem, as it does not appear likely that a *Mahāsenāpati* was in any way participating in the city administration. In connection with this sealing, we are inclined to support V.S. Agrawala that he was a member of the Magha family of Kauśāmbī.[5] The occurrence of this sealing at Rajghat may be taken as an evidence for the political supremacy of the Magha dynasty over Varanasi.

The evidence of sealings as well as terracotta figurines suggest that the religious life of the people of Varanasi during the Period IV was more varied than any of the preceding periods. The Buddhist Śaiva cults, which started influencing the religious life of the people during the Period III, now appeared to have gained further popularity. This observation is attested to by a few terracotta specimens, as well as a fair number of seals and sealings. The god Śiva has sometimes been represented in the terracotta art either with his spouse Pārvati or the *Nandī* bull or both. There are some figurines of Pārvatī alone. However, the number of terracotta figurines, associated with this cult, is not very large. Its wide prevalence is actually

1. Agrawala, V.S., *JNSI*, XXIII, pp. 412-413, also Thaplyal, *op. cit.*, (1972), pp, 100-101.
2. Thaplyal, *op. cit.*, (1972), p. 102.
3. *Ibid.*, pp. 116-117.
4. Agrawala, V.S., *JNSI*, XXIII, p. 413.
5. Agrawala, V.S., *JNSI* XXIII, p. 412.

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denoted by seals and sealings, which not only bear religious legends but sometimes also contain cult symbols.

Among all the religious seals and sealings unearthed from Rajghat during the earlier diggings by the Railway authorities and the Archaeological Survey of India, as well as the recent excavations by the B.H.U., the largest number belongs to the Śaiva cult of the Gupta period. A sizeable number among them contains names ending in *Īśvara*, a typical characteristic of the names of the Śaiva shrines. Among these names, appearing on the seals and sealings, mention may be made of *Bhūteśvara, Hasteśvara, Deveśvara, Kalaseśvara, Bhṛingeśvara, Avimukteśvara, Gabhastīśvara, Pītakeśvara, Yogeśvara, etc.*[1] It is interesting to note that the *Liṅga Purāṇa* and the *Kāśī Khaṇḍa* of the *Skanda Purāṇa* connect almost all these names with the Śaiva cult.[2] Besides the above, the sealings, containing the legend *Mahādeva, Namo-Svāmino Śrī-Skanda rudrasya, Kardamaka, etc.*, also show Śaiva affiliation. The sealings, in which the word *Īśvara* has been suffixed by *Svāmī* or *Dāsa* also seem to be related to the same cult.[3] Most of these sealings exhibit characteristic Śaiva symbols like *Liṅga, Triśūla, Paraśu* and the *Vāhana Nandī*. Anthropomorphic representations of Śiva have also been noticed on some of the sealings.[4] The evidence provided by the above mentioned seals and sealings not only indicate a wide prevalence of the Śaiva cult in ancient Varanasi, but also confirm that the Lord Śiva was worshipped in his various forms.

The occurrence of a few terracotta figurines of the Buddha and a limited number of sealings, related to the Buddhist monasteries, testifies to the fact that a section of the population at Varanasi during this period was attracted towards Buddhism. However, the sealings, bearing wheel and deer device and the legends like *Śrī Dharmachakre* and *Soddharmachakra*, though found at Rajghat, seem to have originally belonged to the monasteries of Sarnath.[5]

Though the terracotta representations of Viṣṇu and his associate gods do not seem to appear during the period under-discussion at ancient Varanasi, yet the evidence of seals and sealings clearly indicate the fairly wide popularity of the Vaiṣṇava cult, surpassed only by the rival Śaiva cult. Several sealings show the popular Vaiṣṇava symbols like *Śaṅkha, Chakra, Gadā* and *Śrīvatsa*, besides containing various legends like *Devaratasvāmin, Dharmānadha, Govindasvāmī, etc.*[6] A good number of sealings, bearing the device of a pair of *Pādukās* and the legend

1. For details see, Thaplyal, *op. cit.*, (1972), pp. 137-142, Agrawala, V.S., 'Clay Sealing from Rajghat', *JNSI*, Vol. XXIII, pp. 408-410.
2. *Ibid.*
3. Thaplyal, *op. cit.*, (1972), pp. 137-142.
4. *Ibid.*, pp. 154-155.
5. Thaplyal, *op. cit.*, (1972), p. 209.
6. *Ibid.*, pp. 156-171.

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Puṣyasaraḥ, has also been reported from Rajghat. In view of the occurrence of these sealings in a large number at Rajghat and in a limited quantity in neighbouring places like Ayodhyā, Thaplyal postulates the possibility of the existence of a Vaiṣṇava shrine named *Puṣyasara* at ancient Varanasi.[1] Besides the above, Banerjee has reported the occurrence of some seals from Rajghat which contain the legend *Namo Bhagavate Vāsudevasya* along with a *Chakra*.[2] A fairly large number of sealings, now housed in the Municipal Museum, Allahabad, the State Museum, Lucknow, and the Bharat Kala Bhavan, seems to be associated with the *Varāha* incarnation of Viṣṇu, as they exhibit the figure of a boar and the legend on them reads *Rasikasya*.[3] Apart from these, mention may also be made of a few sealings, showing Lakṣmī or Gaja Lakṣamī,[4] the spouse of the Lord Viṣṇu. In the absence of any legend and precise stratigraphical context (they were acquired during the Railway digging), it is difficult to determine their exact period, although, on stylistic grounds, they appear to belong to the Gupta period. The figures of the Goddess Durgā and her *Mahiṣāsuramardinī* form[5] on some of the Rajghat sealings may be taken as an indication of the prevalence of the Śākta cult among the inhabitants of ancient Varanasi. Some of these sealings also contain the name Durgā.

The preceding discussion of the evidence for the religious life of the people of Varanasi during the Period IV is a fair indication of the popularity of the Śaivism, the Vaiṣṇavism and the Buddhism, in that order. However, the earlier tradition of folk religions was still continued in a limited way, as indicated by the occurrence of a few terracotta figurines of *Naigameśa* and *Naigameśī*, as well as the various types of Mother Goddess.

It is generally believed that most of the religious sealings were issued by the cult shrines, which occasionally distributed them among the devotees. Thus, the occurrence of a large number of sealings associated with various pantheous, in fact, presupposes the existence of different shrines in ancient Varanasi during the period under discussion. However, the limited excavation did not yield any evidence for any of the shrines. Reference may also be made in this connection to the presence of *Charaṇa* group of sealings, which included those of *Bahvṛicha-charaṇa, Charaka-charaṇa, Chhāndoga-charaṇa* and *Ātharvaṇika-charaṇa*.[6] Besides, there are some other sealings, reading variously as *Trividyā, Śrī-Chaturvidyasya* and *Śrī Sarvvatra-vidyā*.[7] The most accepted view in respect of these sealings

1. Thaplyal, *op. cit.*, (1972), p. 161.
2. Banerjea, J.N., *Religion in Art and Archaeology*, Lucknow, (1968) p. 20.
3. Thaplyal, *op. cit.*, (1972), pp. 168-169.
4. *Ibid.*, pp. 176-182.
5. *Ibid.*, pp. 173-176.
6. Agrawala, V.S., *JNSI*, XXIII, pp. 409-410, also Pathak, V.S., 'A Sealing of the Atharvaṇika Charaṇa '*JNSI*', Vol. XXVI, 1964, pp. 214, ff.
7. Agrawala, V.S., *JNSI*, XXIII, p. 410.

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among the scholars is that they were issued by the colleges or the educational institutions, specially meant for the study of the various branches of the vedic knowledge. These educational institutions were connected with different shrines, which were solely responsible for their management. Thus, the occurrence of these sealings in a fairly large number in Varanasi confirms the existence of numerous temples during the Period IV on the one hand, and on the other hand, also indicates that it had now become an important centre of the vedic learning. Whether the *Charaṇa* sealings also point out to the revival of the vedic customs and practices, cannot be positively determined, in the absence of any confirmatory evidence.

The above account of the cultural attainments of the inhabitants of Varanasi during the Period IV clearly brings out the fact that they could be credited with multifarious material achievements, pertaining to the buildings, industries, agriculture and trade. However, a new dimension was added to the cultural life of the people of this township by way of the development of different religious cults and presumably also the construction of their shrines, particularly those connected with Śaivism and Vaiṣṇavism. In fact, this new aspect marks the beginning of a new phase in the history of Varanasi, which after further growth during the subsequent periods, distinguished this city as one of the most significant religious centres of the entire sub-continent.

Resume

The earliest settlers of Varanasi had a simple tribal economy and had their small habitations along the river sides. This village settlement with meagre resources did not show any trace of urbanisation.

The Period II probably set the process of urbanisation, when in sixth century B.C., Varanasi acquired the status of the capital of the Kāśī *Janapada*, as is evident from the literary sources. The construction of the rampart (*prākāra*) and the moat (*parikhā*) might have become necessary in view of the defence requirements of the capital. It may be emphasized that almost all the cities of the time of the Buddha were capitals of different big or small states. From the literary tradition, it appears that it was probably the political consideration which was fundamentally responsible for initiating the process of urbanisation in ancient India. If this line of argumentation is accepted, Varanasi had acquired the urban character with the construction of the rampart and the moat in the Period II, as these defence requirements have been repeatedly referred to in the ancient Indian literature as the essential features of a *nagara*. Side by side the growth of the political importance of the township, the process of the development of various industries also started. There is some indirect evidence to suggest that some of the industrial products were probably exported to the other centres. It may be assumed that the trade activities might have acquired a boost after the introduction of coinage during the late phase

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of the period. In spite of the growth of crafts and industries, development of iron technology and the political status of the township, people continued to live in small huts with thatched roofs. From the point of view of structures and town plannings, Varanasi had yet to acquire many features, which one would normally like to associate with an urban centre.

With the advent of the Period III begins the era of prosperity in the cultural history of Varanasi, which reached its climax during the late phase of the Period III and the Period IV. The city had now developed into a full fledged urban centre with elaborate town planning, efficient civic sanitary arrangement, and different sets of private and public buildings. Besides further developing the already existing industries, many new ones were introduced. The number of industrial products not only showed a marked increase in the late phase of the Period III, but several of them, manufactured particularly in the Period IV, distinguished themselves for a high degree of aesthetic quality. The city had not only entered in the brisk trade of industrial products, but, during the Period IV, it probably exported large quantities of grain to different places. The overall prosperity of the people of Varanasi during the periods under discussion is amply exhibited by the marked increase in the use of luxury items.

Side by side the economic growth, Varanasi also started developing into a religious centre. The available evidence suggests that Śaivism and Buddhism made a modest beginning during the late phase of the Period III, and the former along with the Vaiṣṇavism attained wide popularity during the Period IV. Buddhism, however, could not make much headway. The evidence of seals and sealings indicates that the township had several temples of various Śaiva and Vaiṣṇava gods and goddesses, and many of them were also running small educational institutions. This was entirely a new dimension in the history of Varanasi, and, as we know from both literary and archaeological sources, it was this particular aspect of the township which flourished more than others in the subsequent periods. The evidence provided by many literary works of the medieval period, particularly the *Kāśī Khaṇḍa* of the *Skanda Purāṇa*, and the numerous scattered architectural fragments, presumably of an imposing temple, built in the post-Gupta-period, are sufficient to establish the fact that, in the subsequent times, Varanasi was better known to the people of the sub-continent for its religious and educational attainments than any of its other features.

The above discussion may lead us to a probable inference that it was not any one factor which was responsible for the growth of Varanasi as an urban centre of ancient India. It appears that from time to time different factors contributed to the development of township. Initially it was probably the political importance attached to the place which set the process of urbanisation. Almost simultaneously started

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the economic growth. During the subsequent periods, when the political significance of the township declined, it was the economic factor which seemed to have contributed most to the growth of Varanasi for a long span of a few centuries. Gradually, from the Period IV onwards, it started developing into a religious and educational centre, and, it may be presumed that the religious elements played a more important role in the growth of the city during the medieval times than any other factors.

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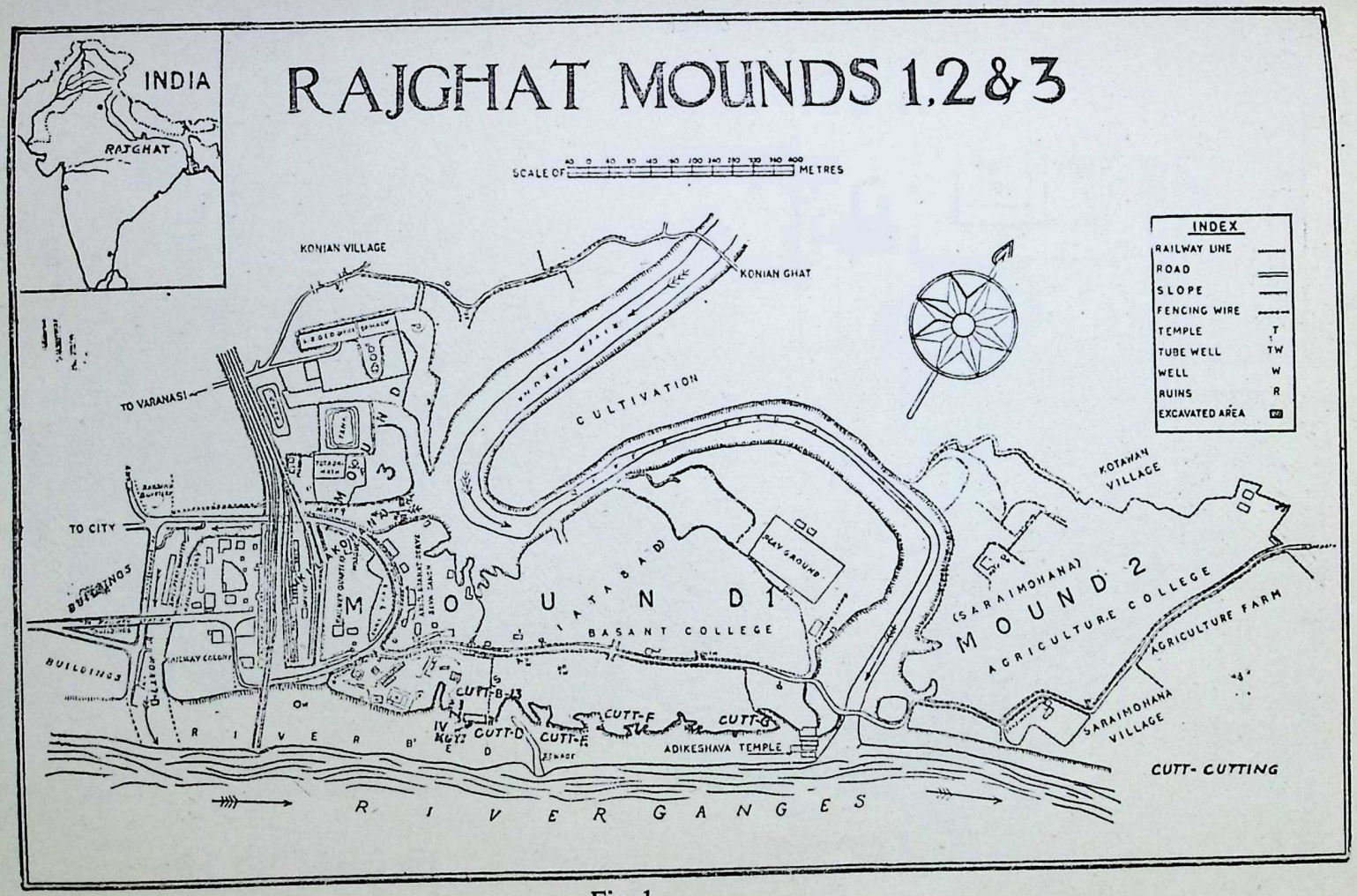

Fig. 1

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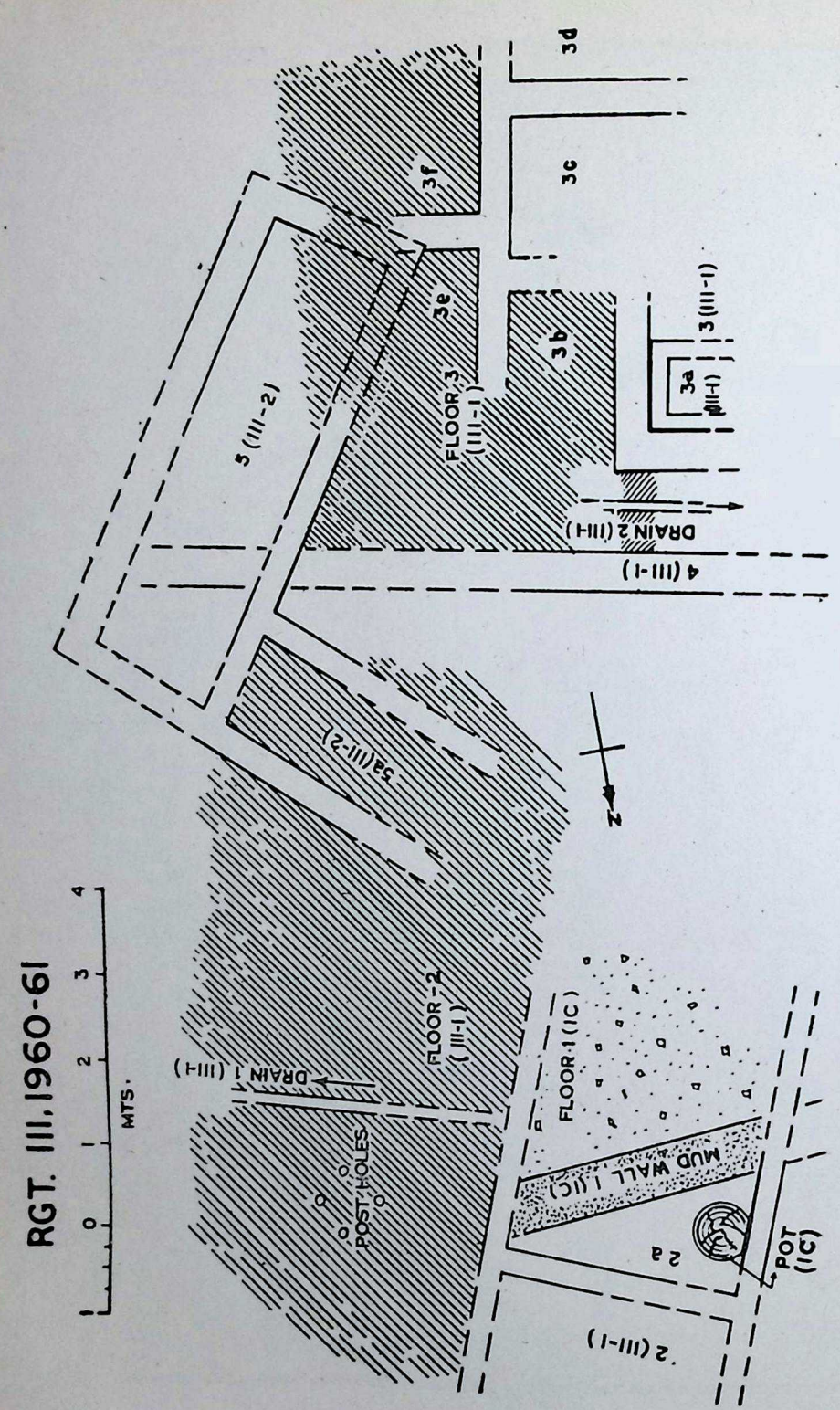

Fig. 2

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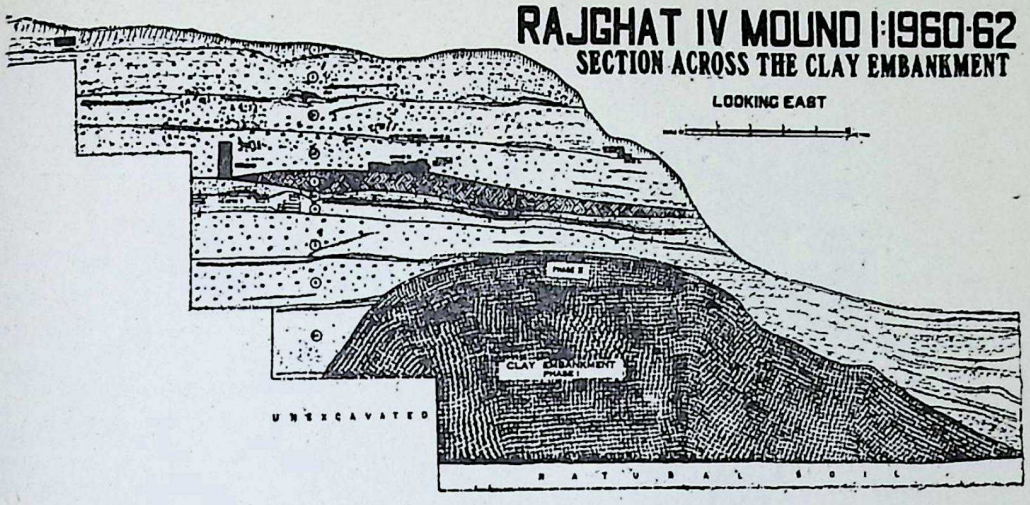

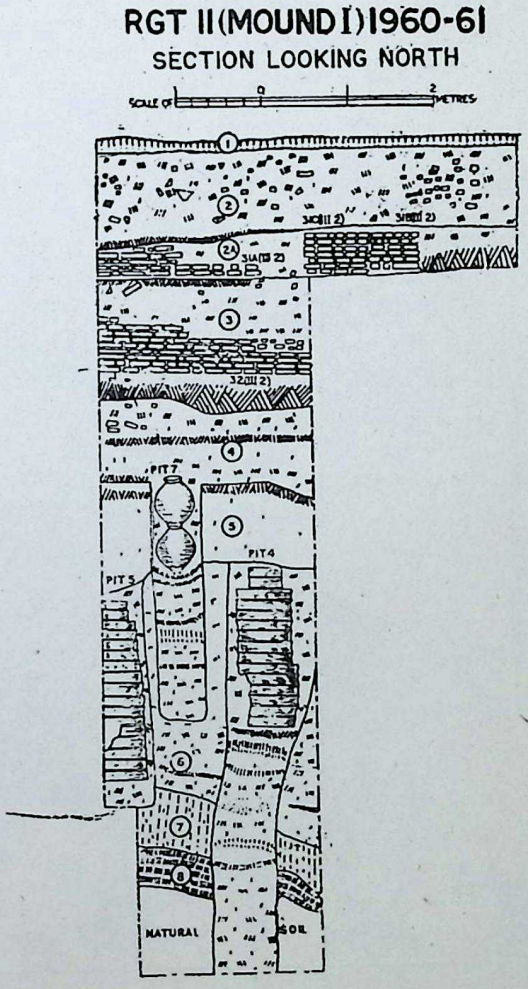

B

Fig. 3 A & B

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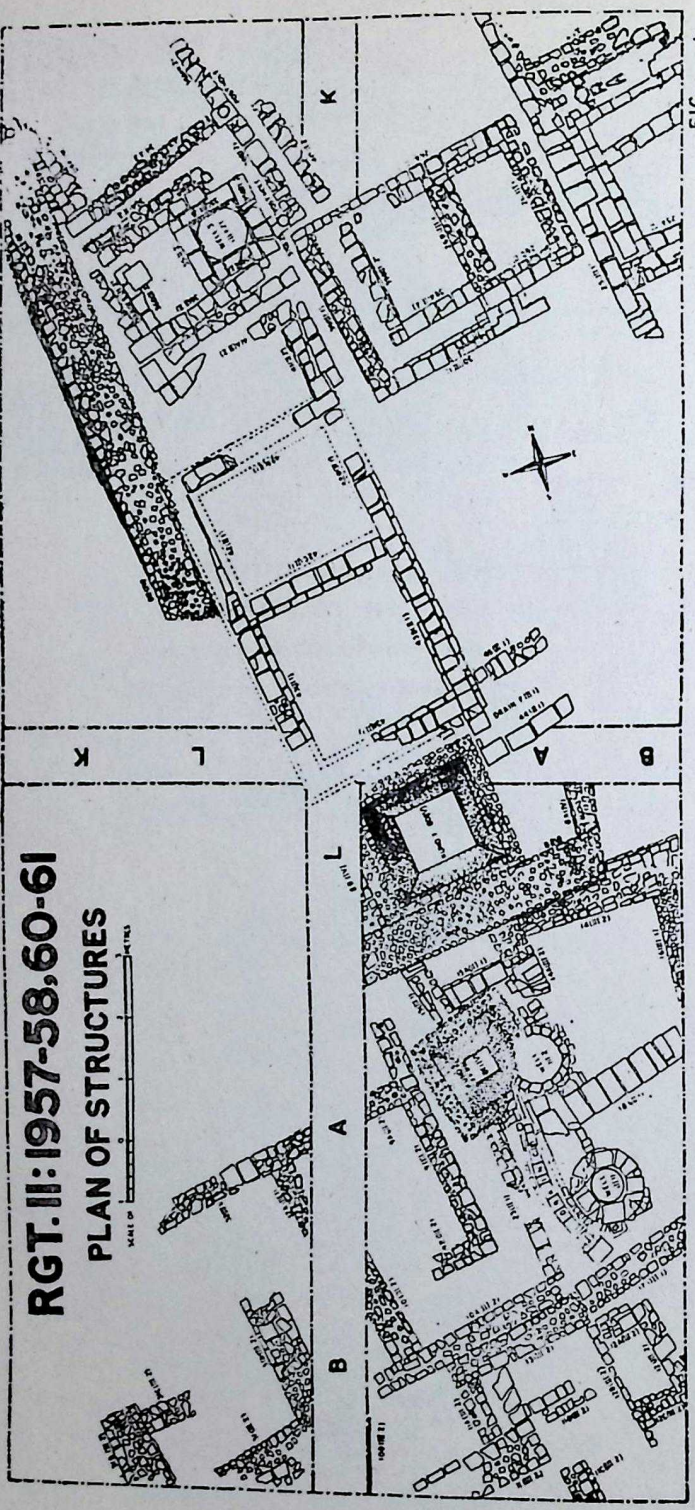

Fig. 4

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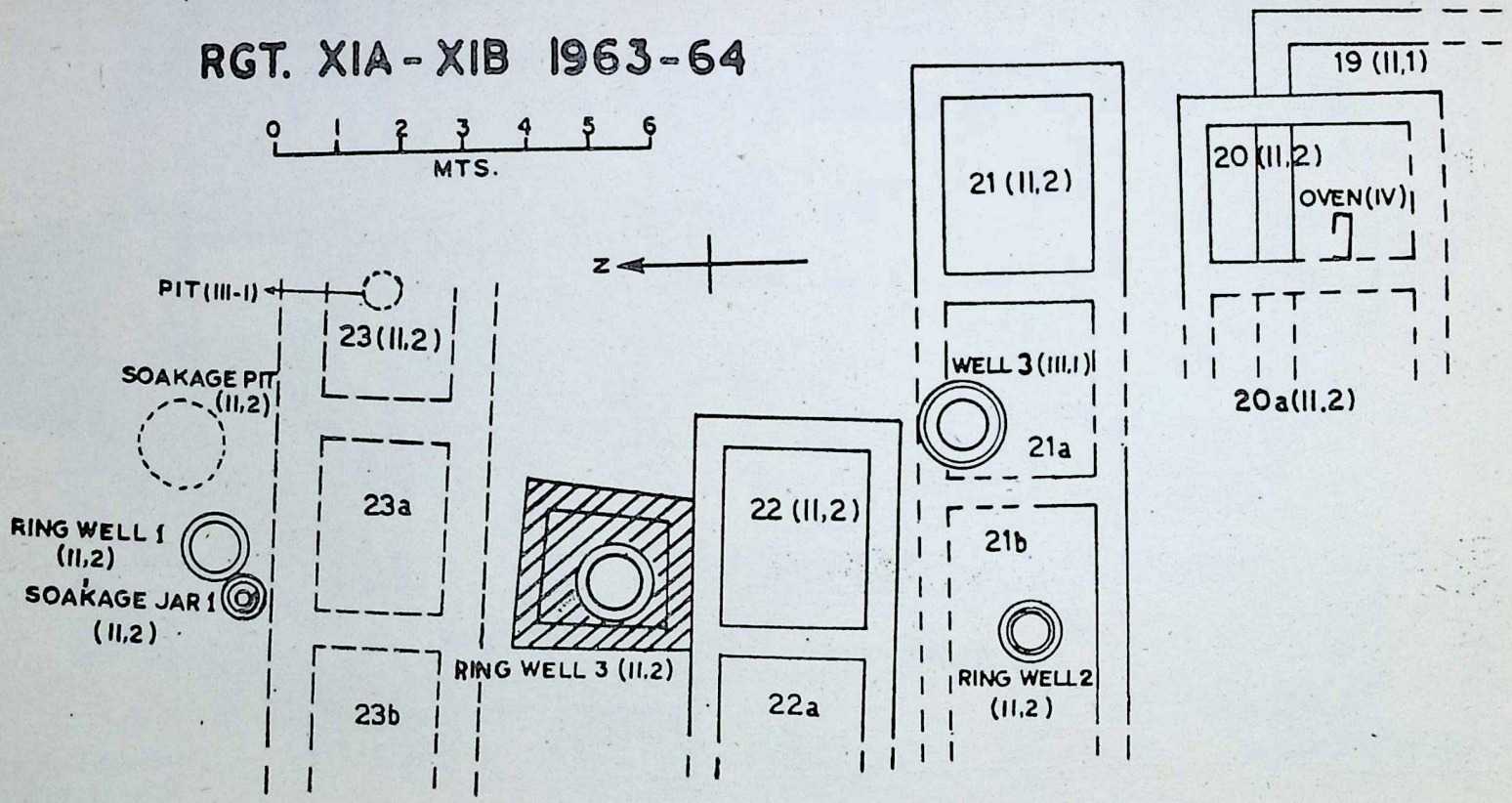

Fig. 5

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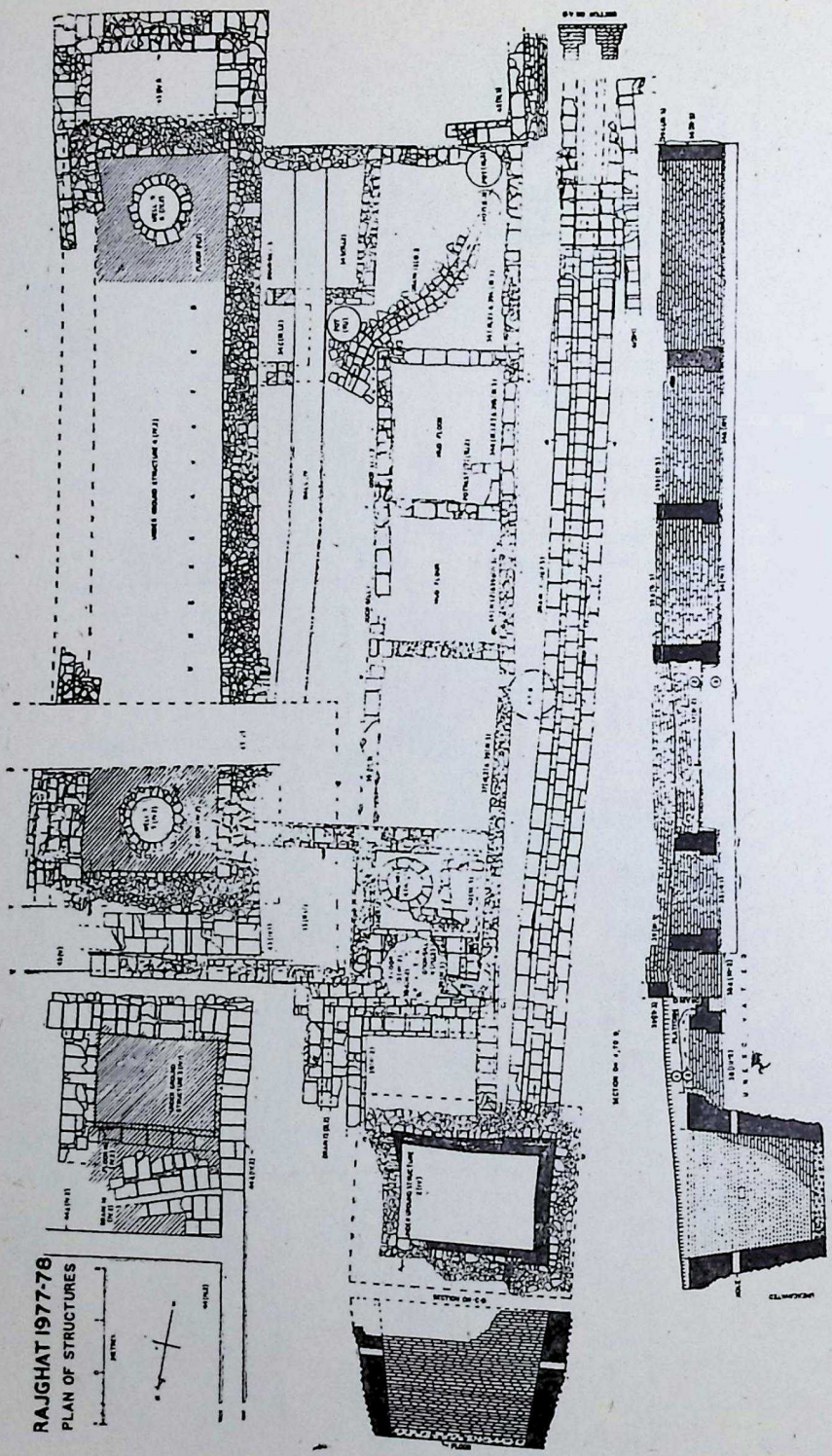

Fig. 6

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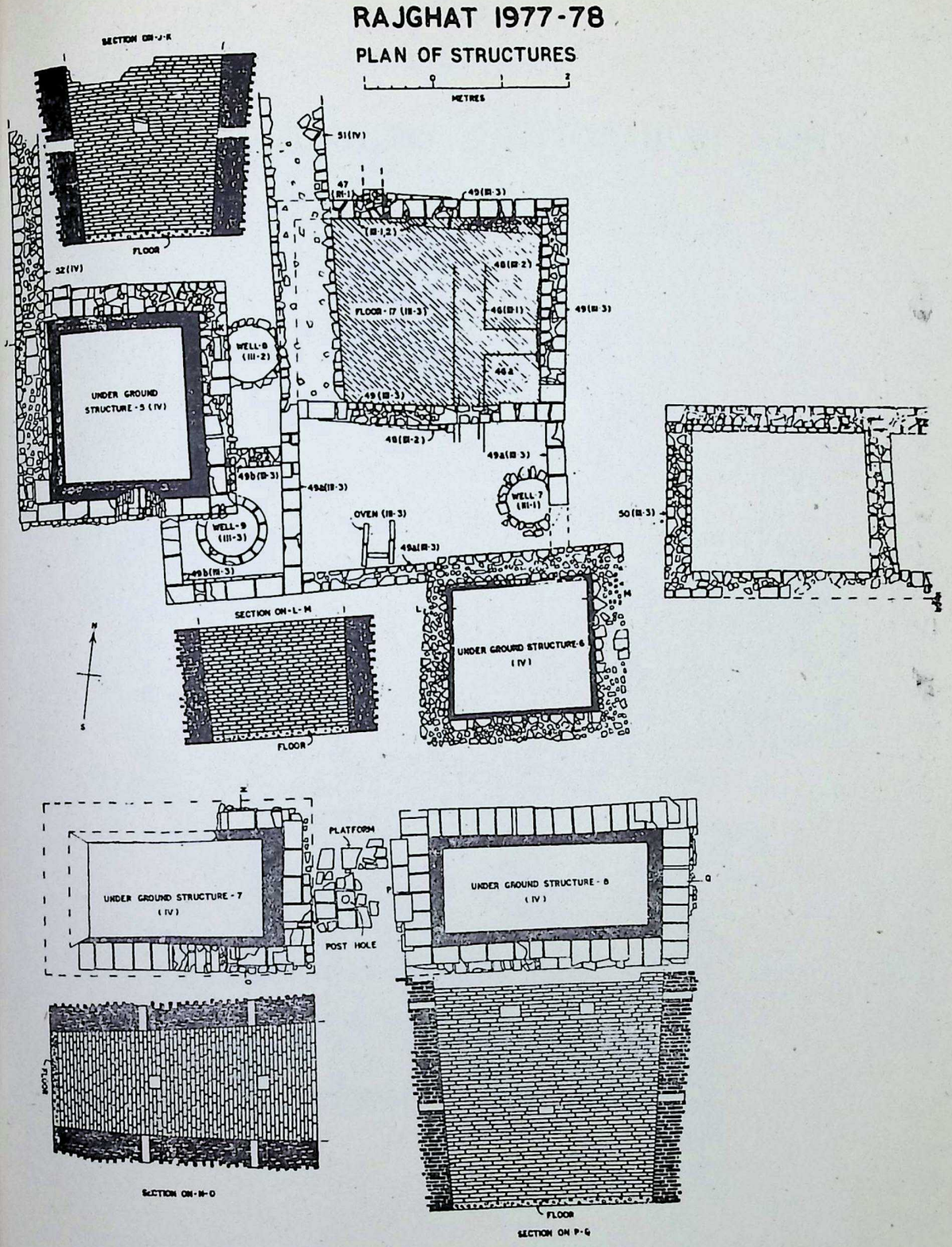

Fig. 7

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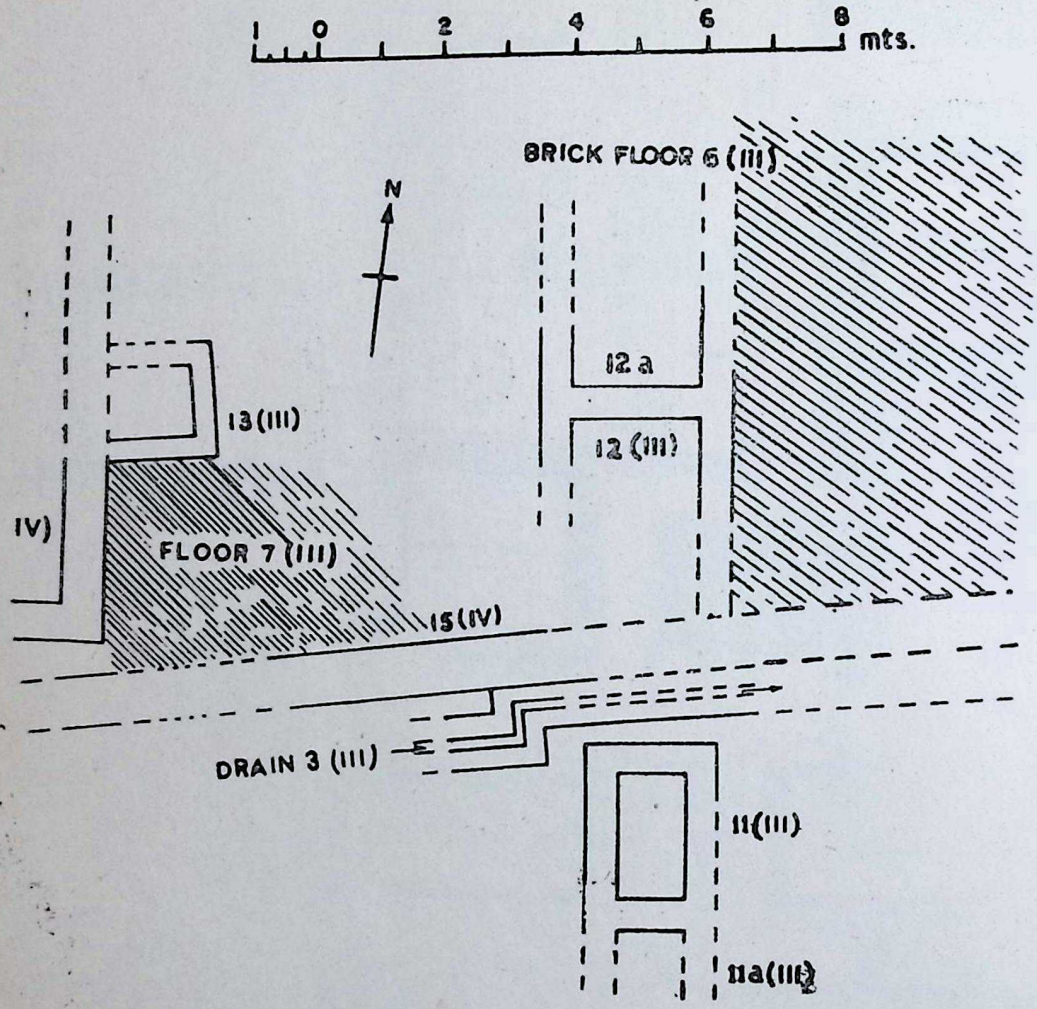

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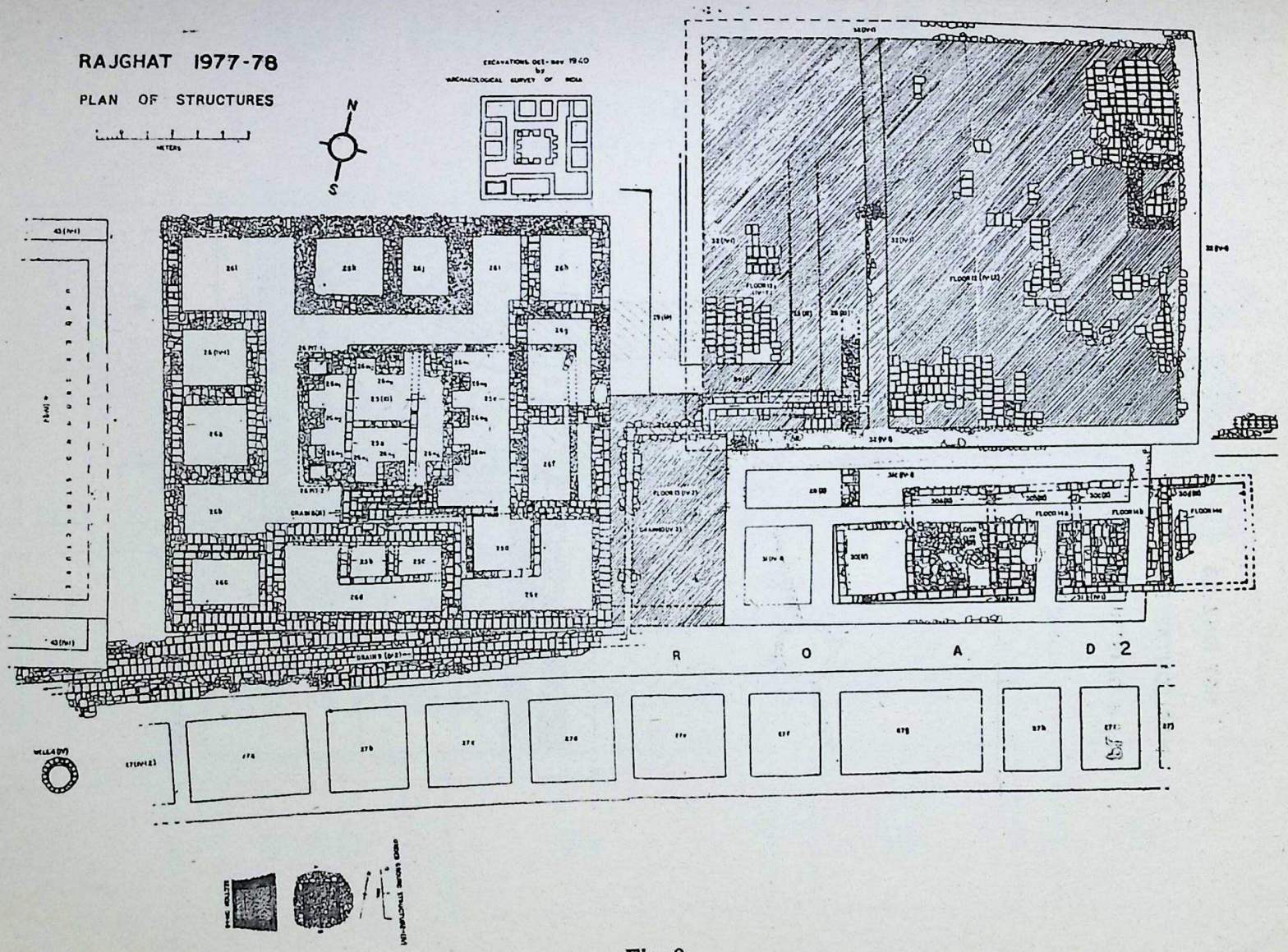
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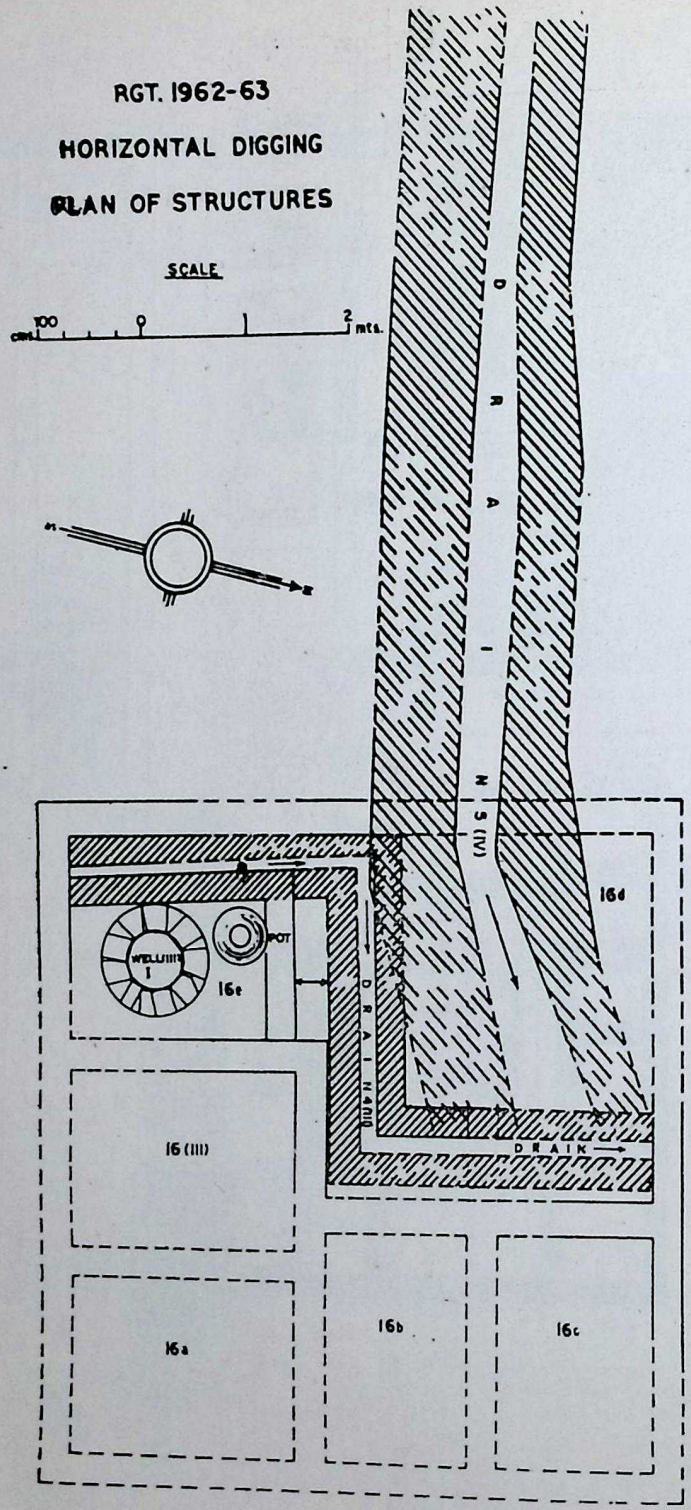

Fig. 10

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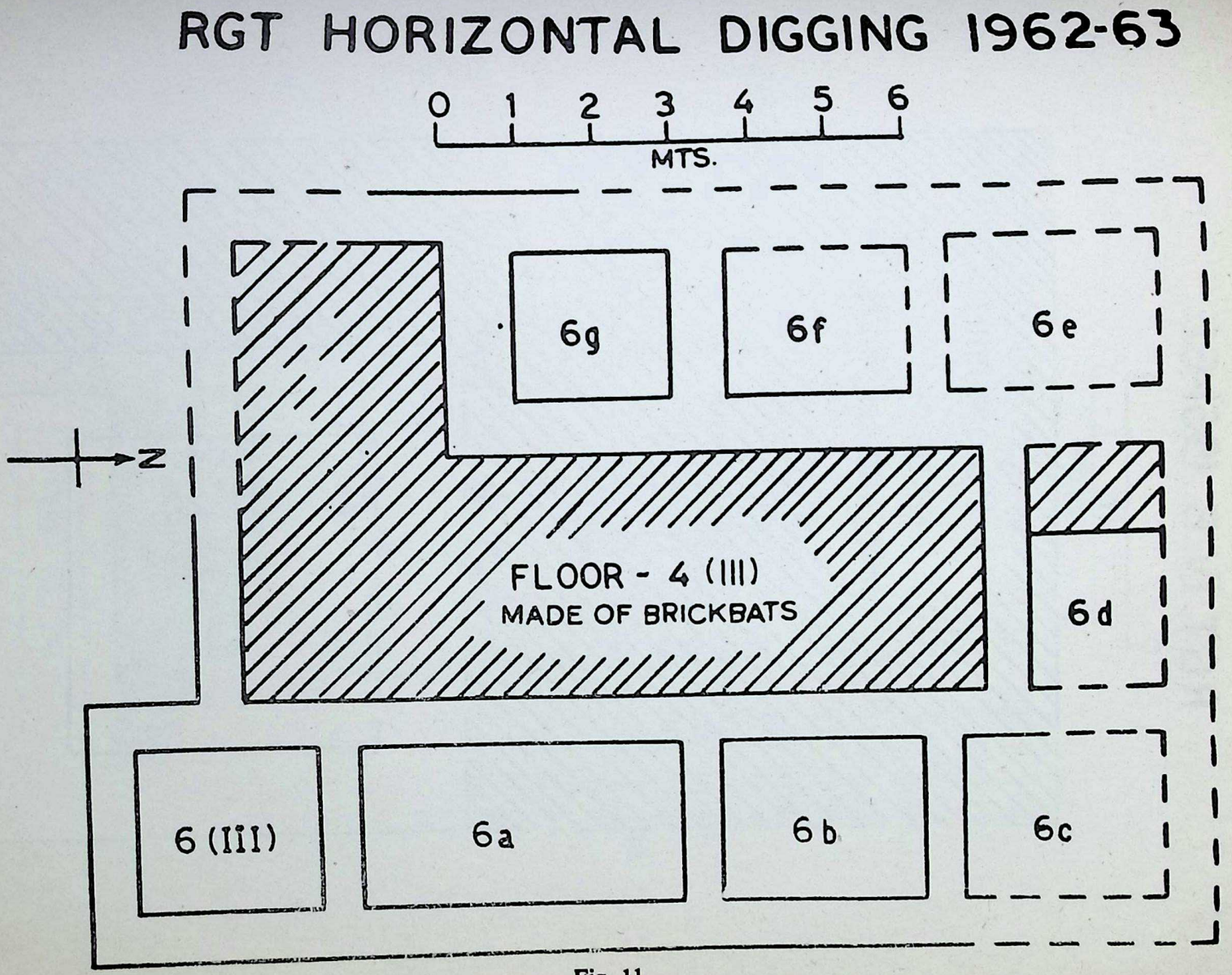

Fig. 11

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RGT. IV B 1961-62

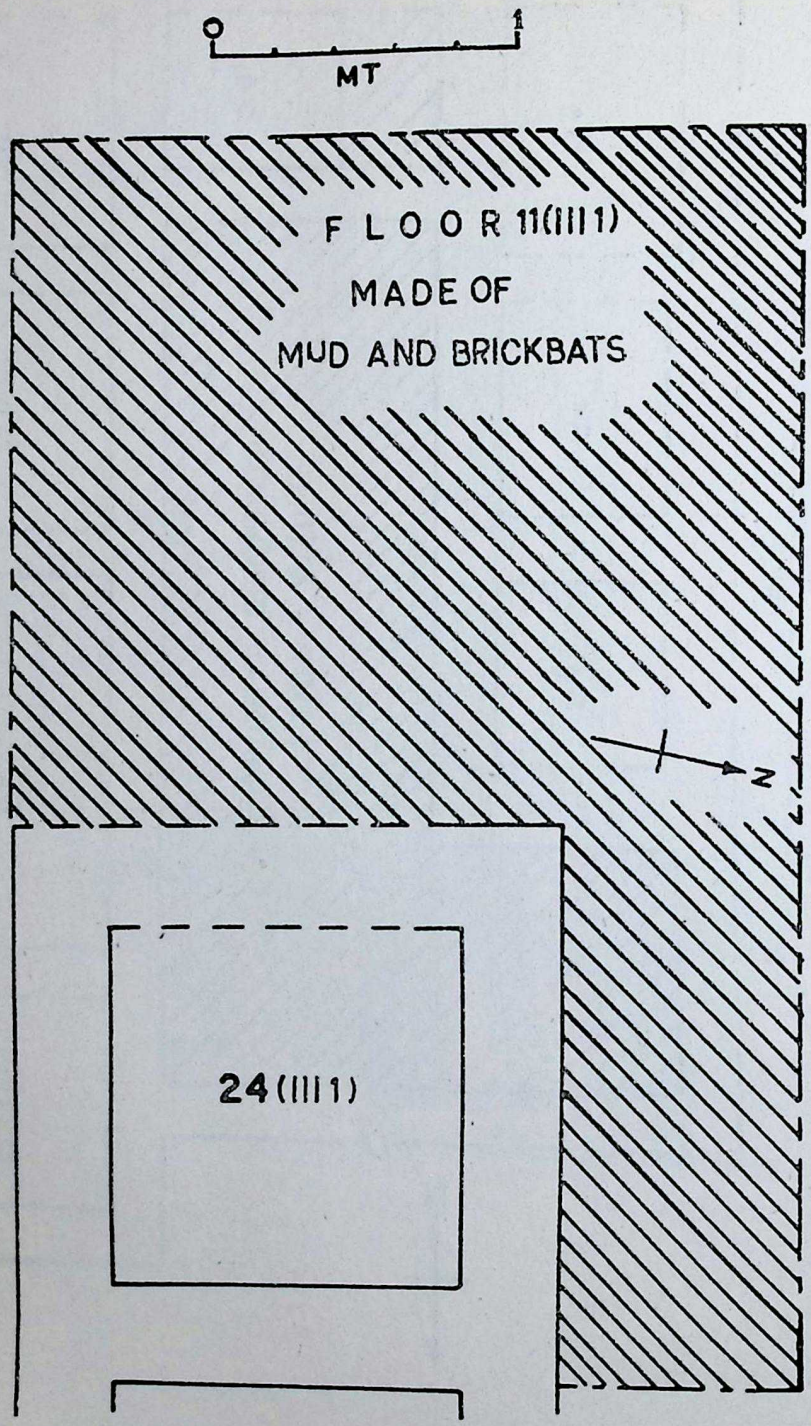

Fig. 12

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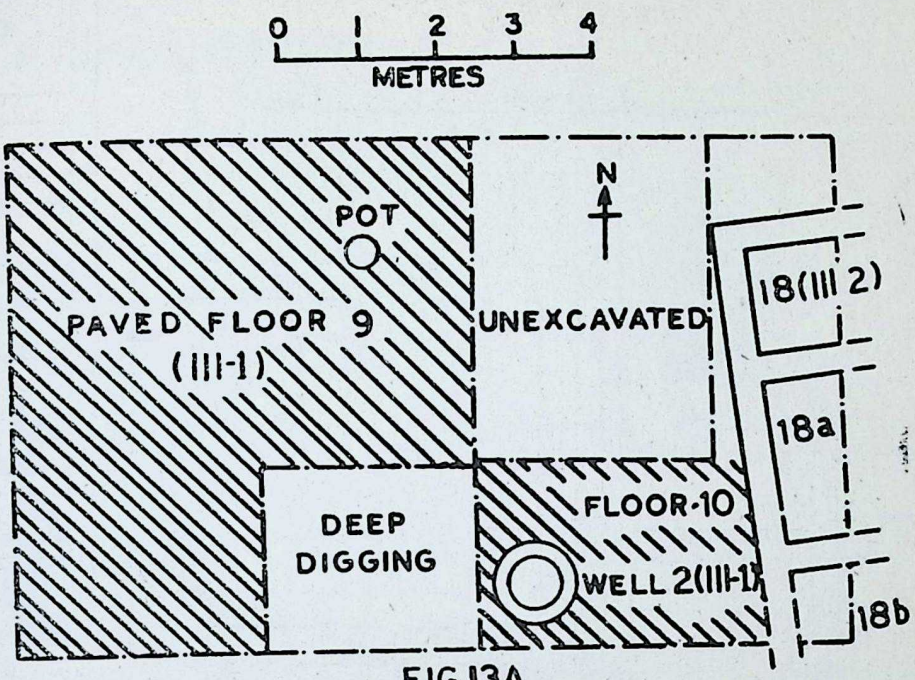

FIG.13A

RGT IXA 1961-62

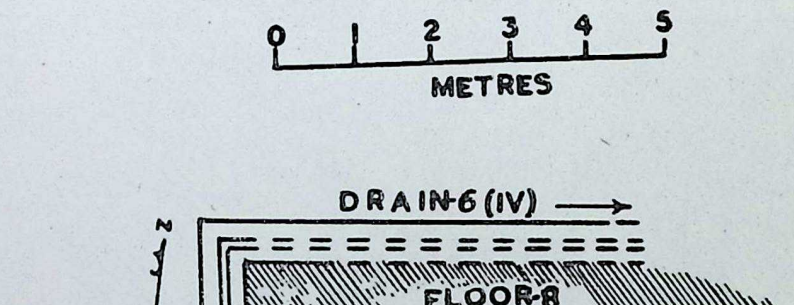

FIG.13B

Fig. 13 A & B

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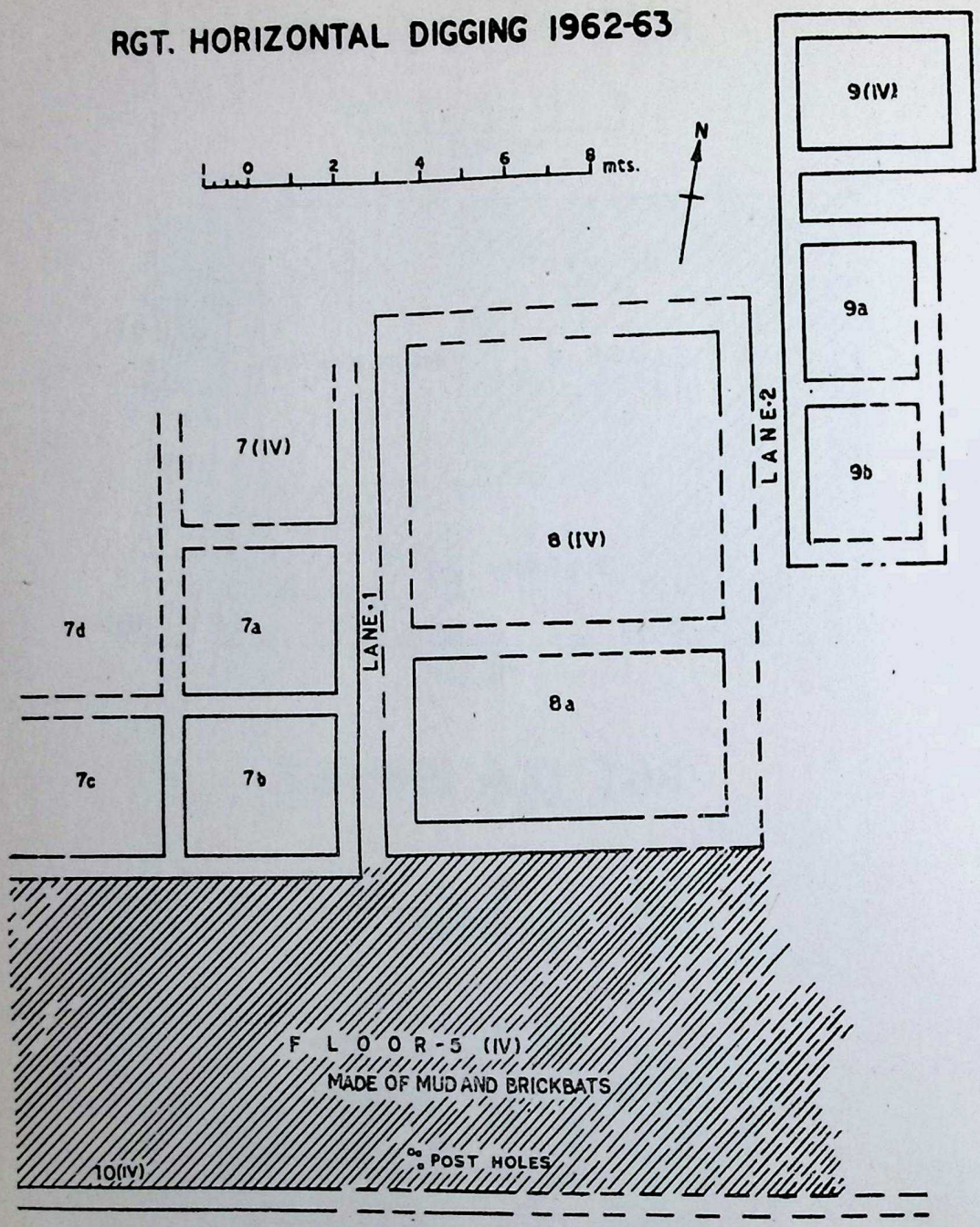

Fig. 14

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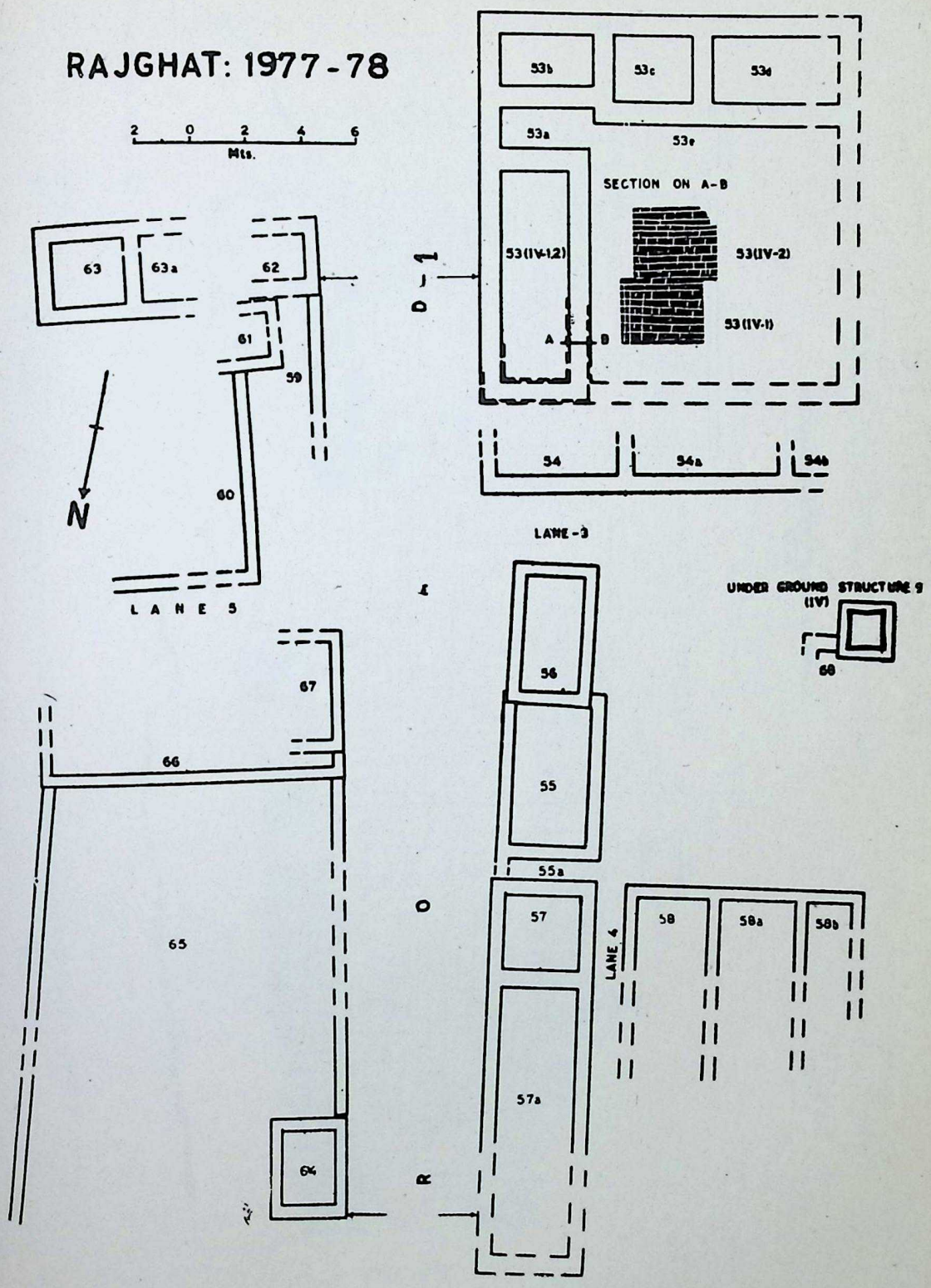

Fig. 15

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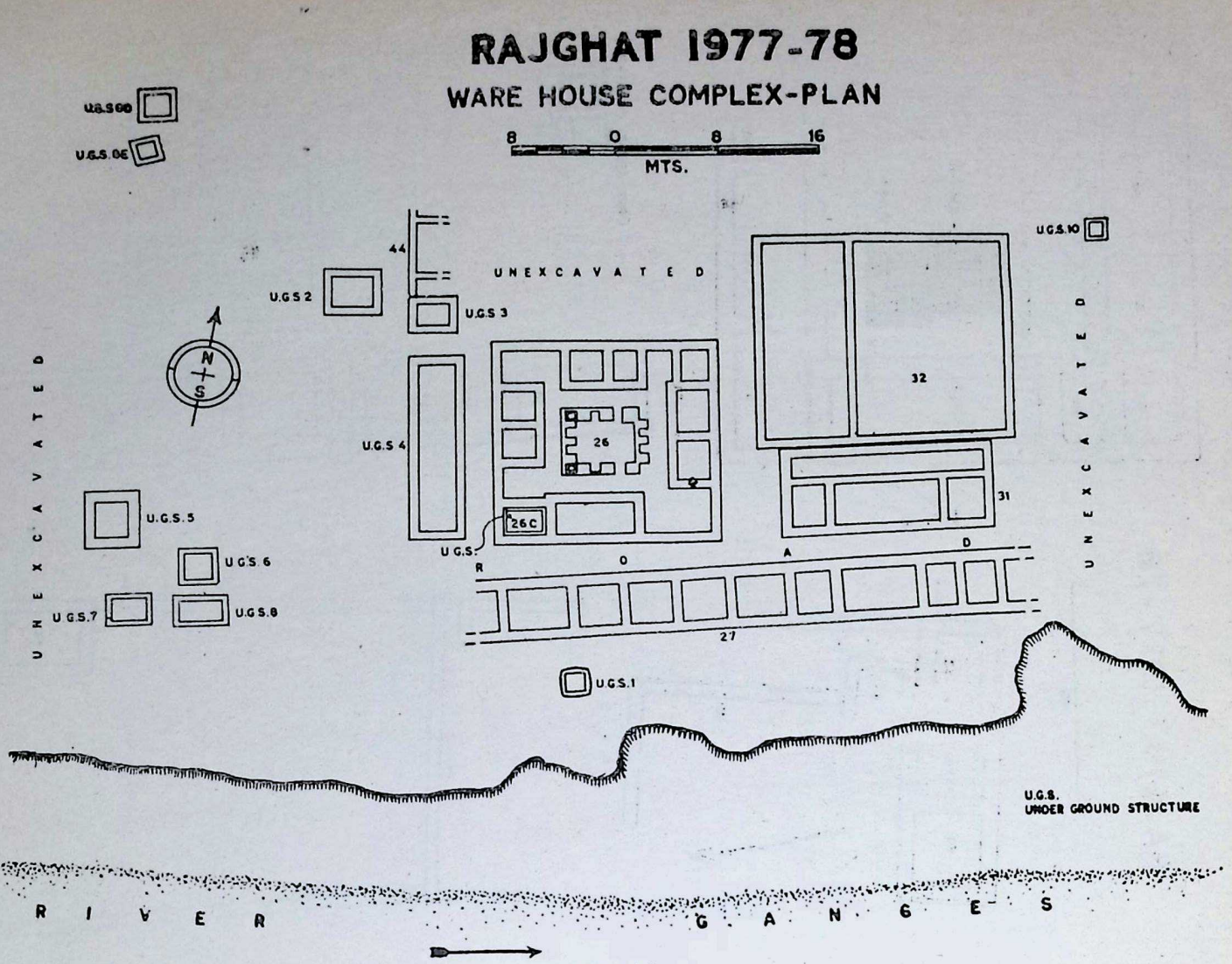

Fig. 16

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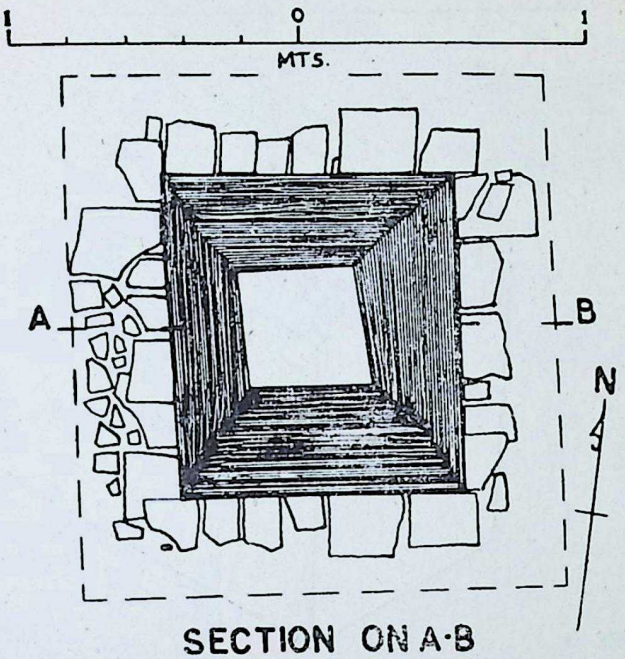
RGT. 1977-78

UNDER GROUND STRUCTURE
10 (IV)



SECTION ON A-B

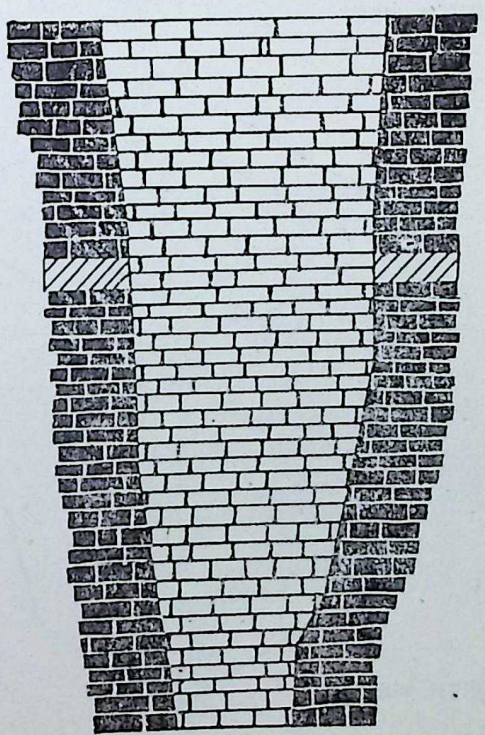


Fig. 17

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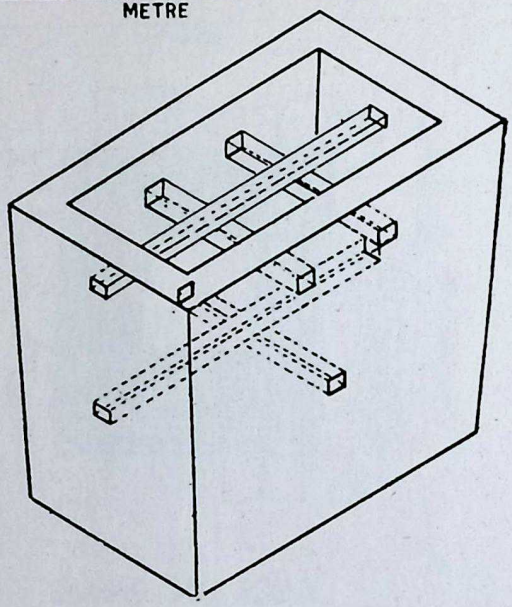
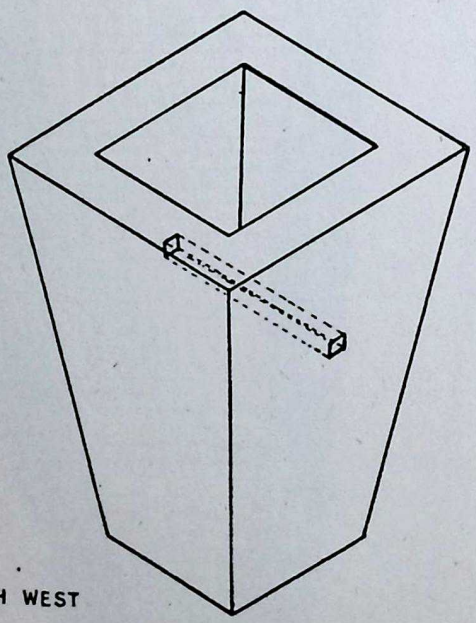
RGT. 1977-78

ISOMETRIC VIEW OF THE UNDER GROUND STRUCTURES



TYPE 3
FROM SOUTH WEST



TYPE 2
FROM NORTH WEST

Fig. 18

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

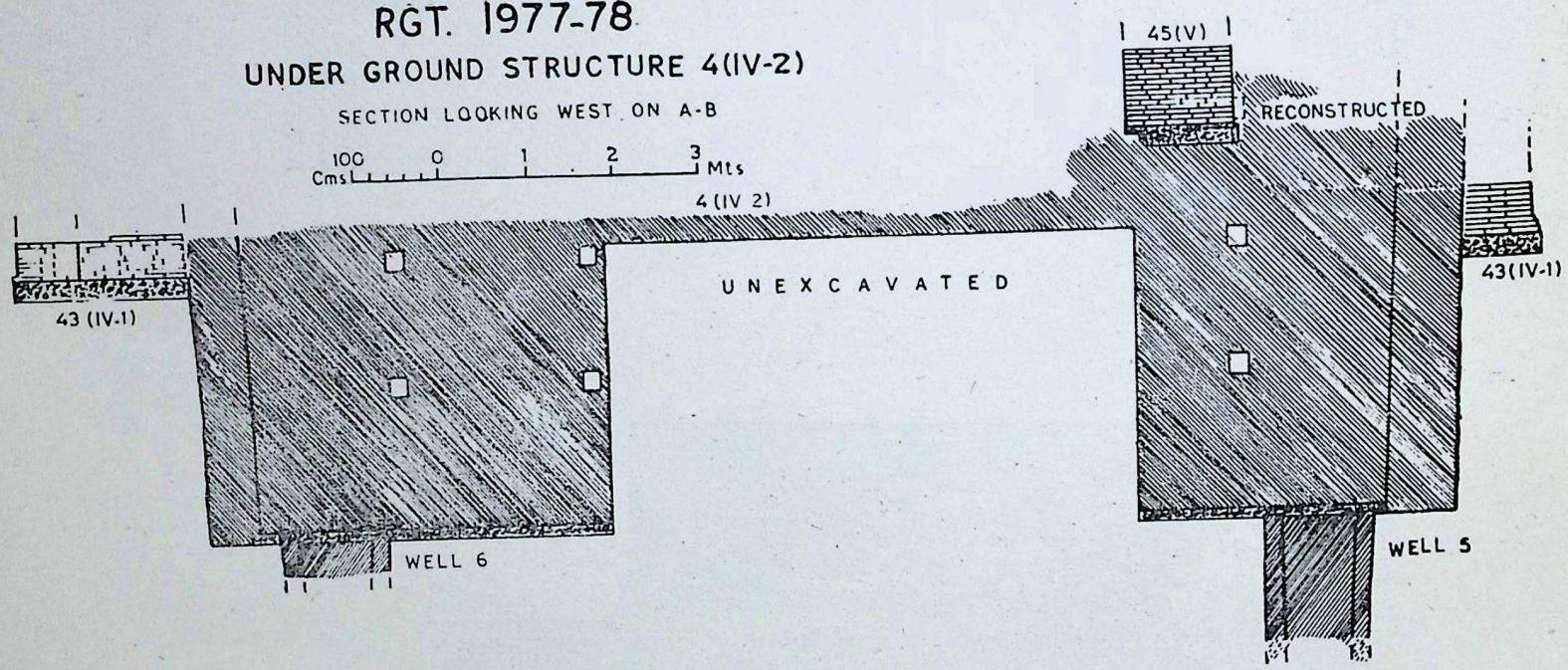


Fig. 19

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

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Digitized by Arya Samaj Foundation Chennai and eGangotri

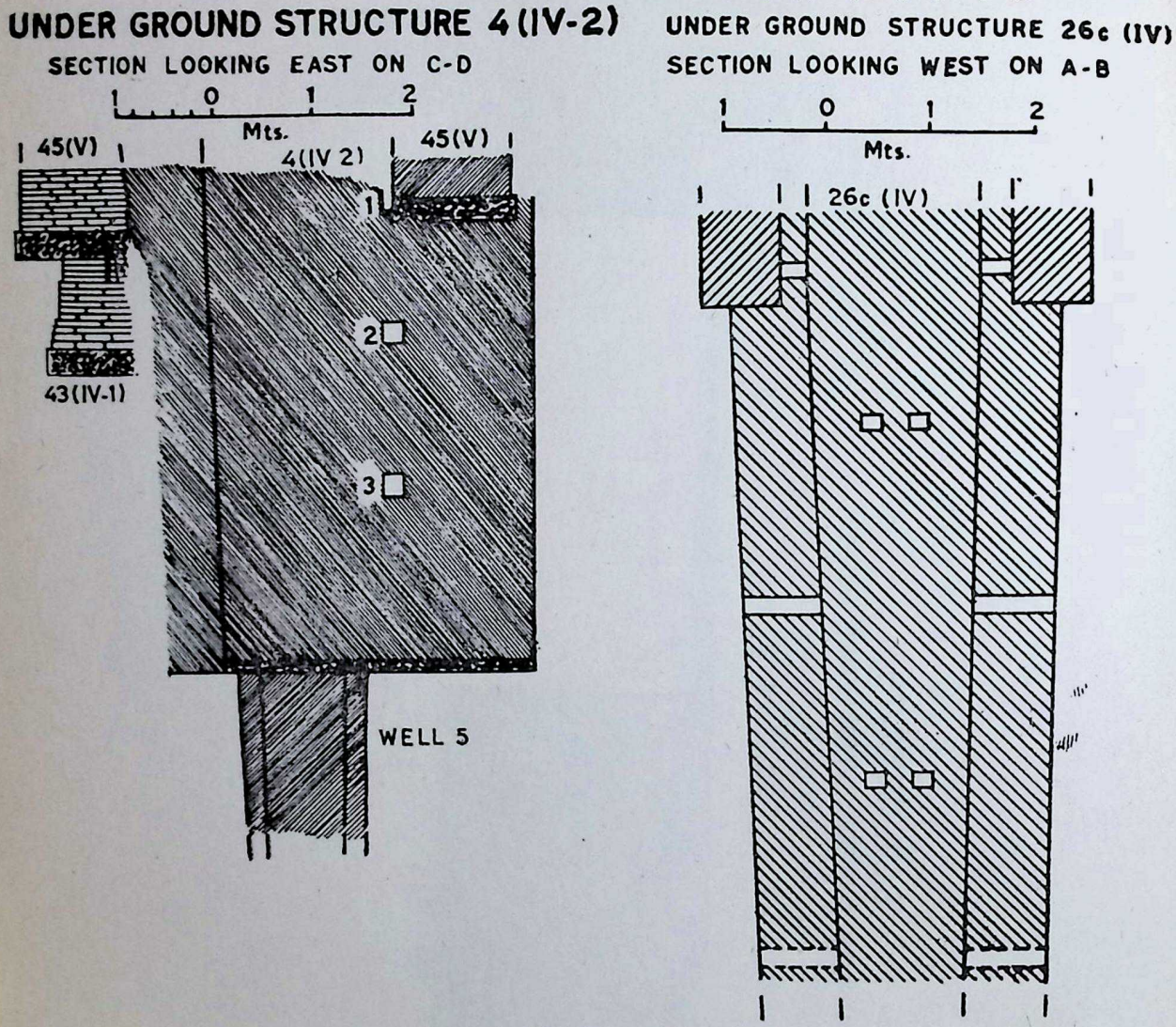

Fig. 20

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

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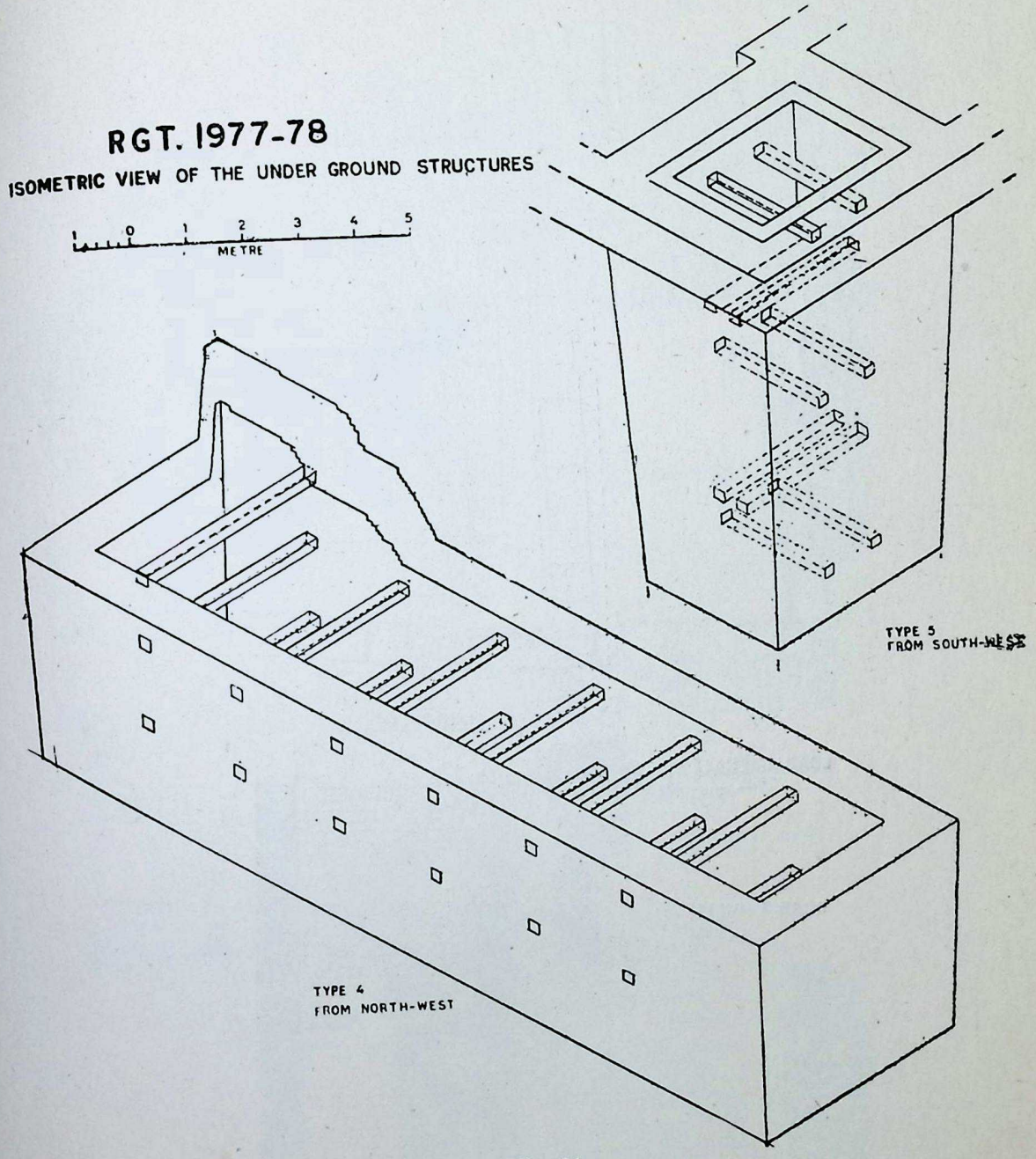

Fig. 21

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

Digitized by Arya Samaj Foundation Chennai and eGangotri

EXCAVATION AT KHAIRADIH DIST. BALLIA
1982 - 83

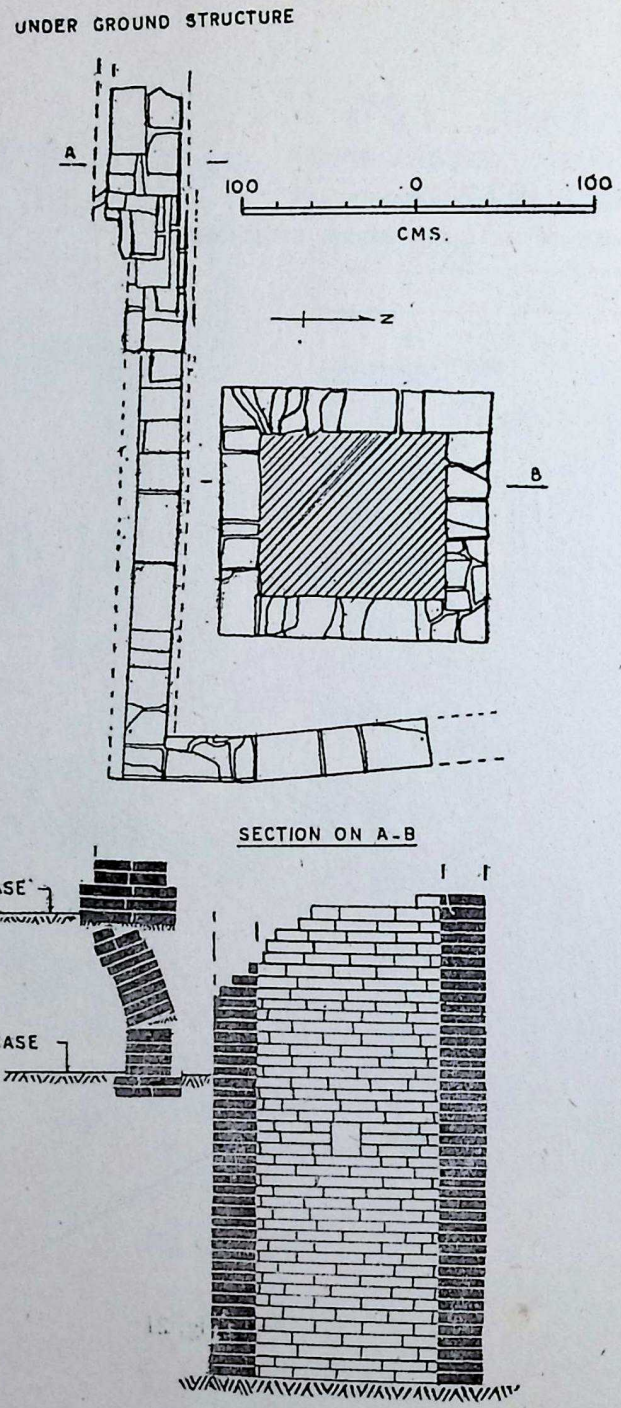

Fig. 22

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

Digitized by Arya Samaj Foundation Chennai and eGangotri

FAZIL NAGAR (DEORIA) 1978-79

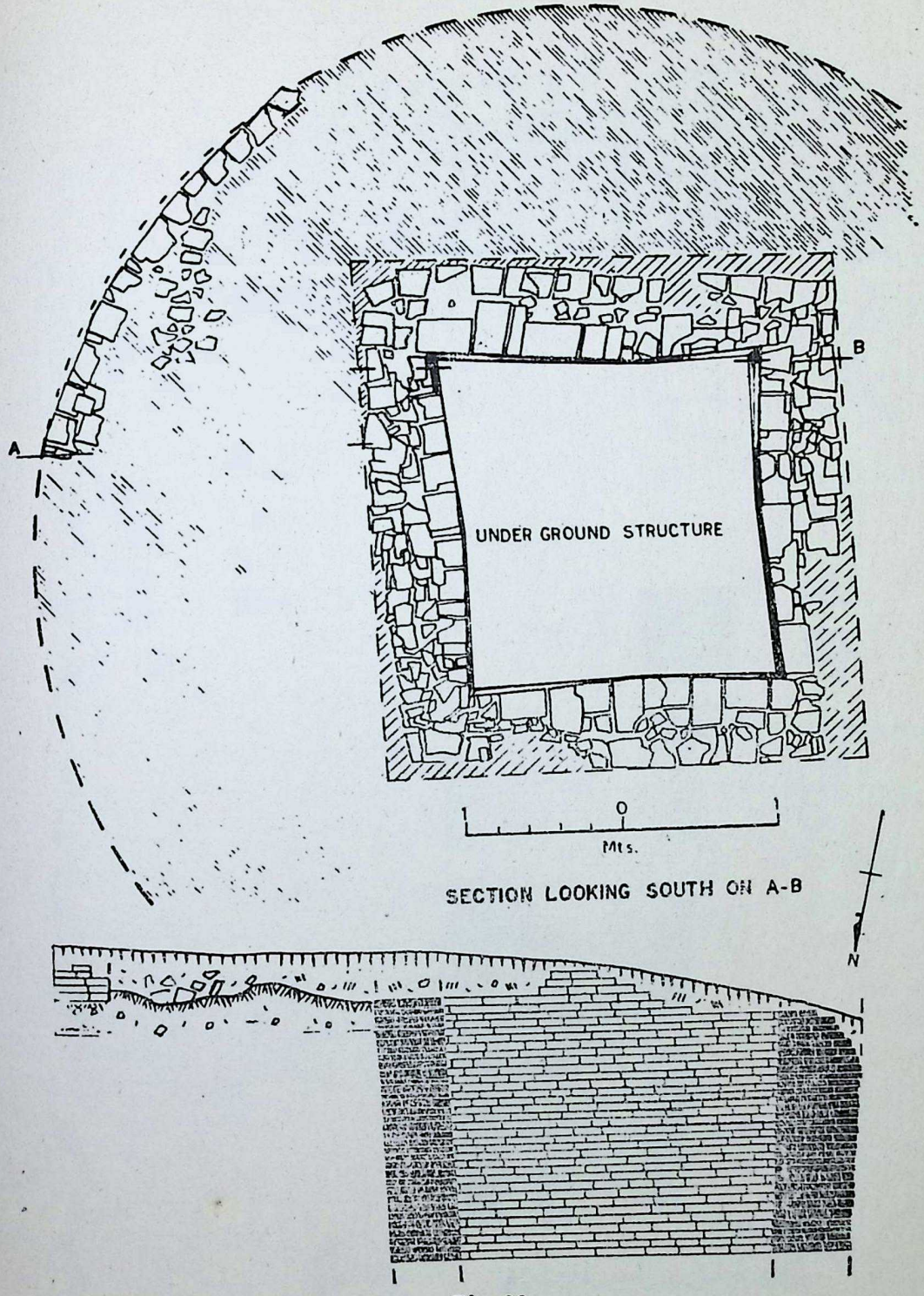

Fig. 23

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

Digitized by Arya Samaj Foundation Chennai and eGangotri

EXCAVATION AT KHAIRADIH DIST. BALLIA 1982-83

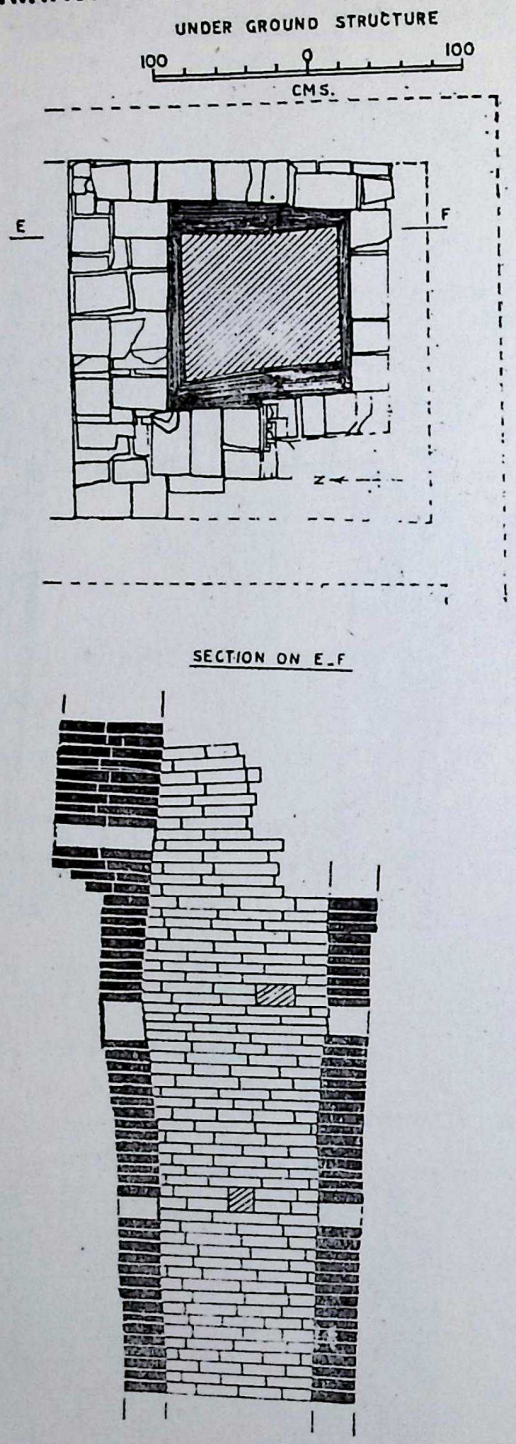

Fig. 24

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

Digitized by Arya Samaj Foundation Chennai and eGangotri

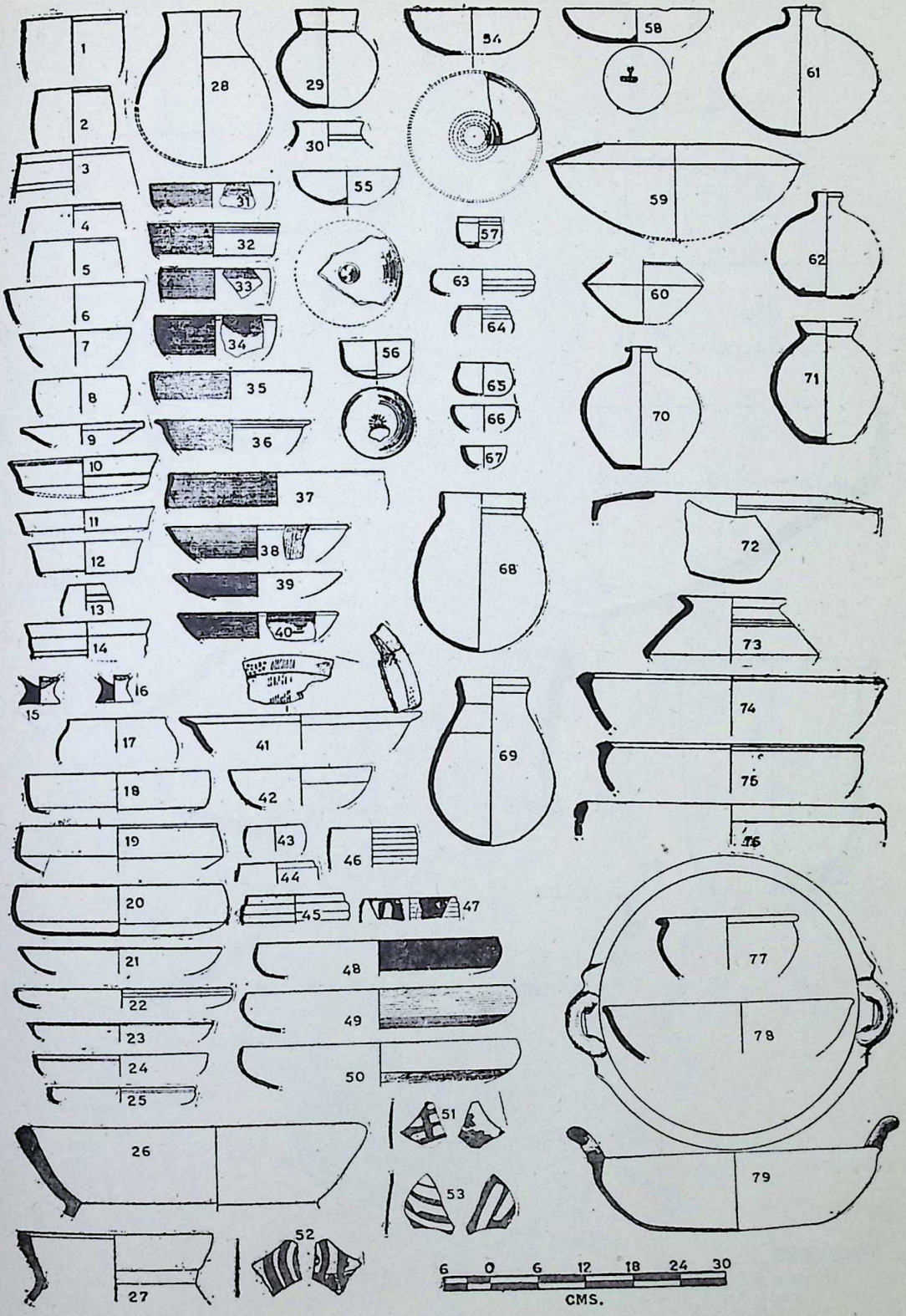

Fig. 25

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

Digitized by Arya Samaj Foundation Chennai and eGangotri

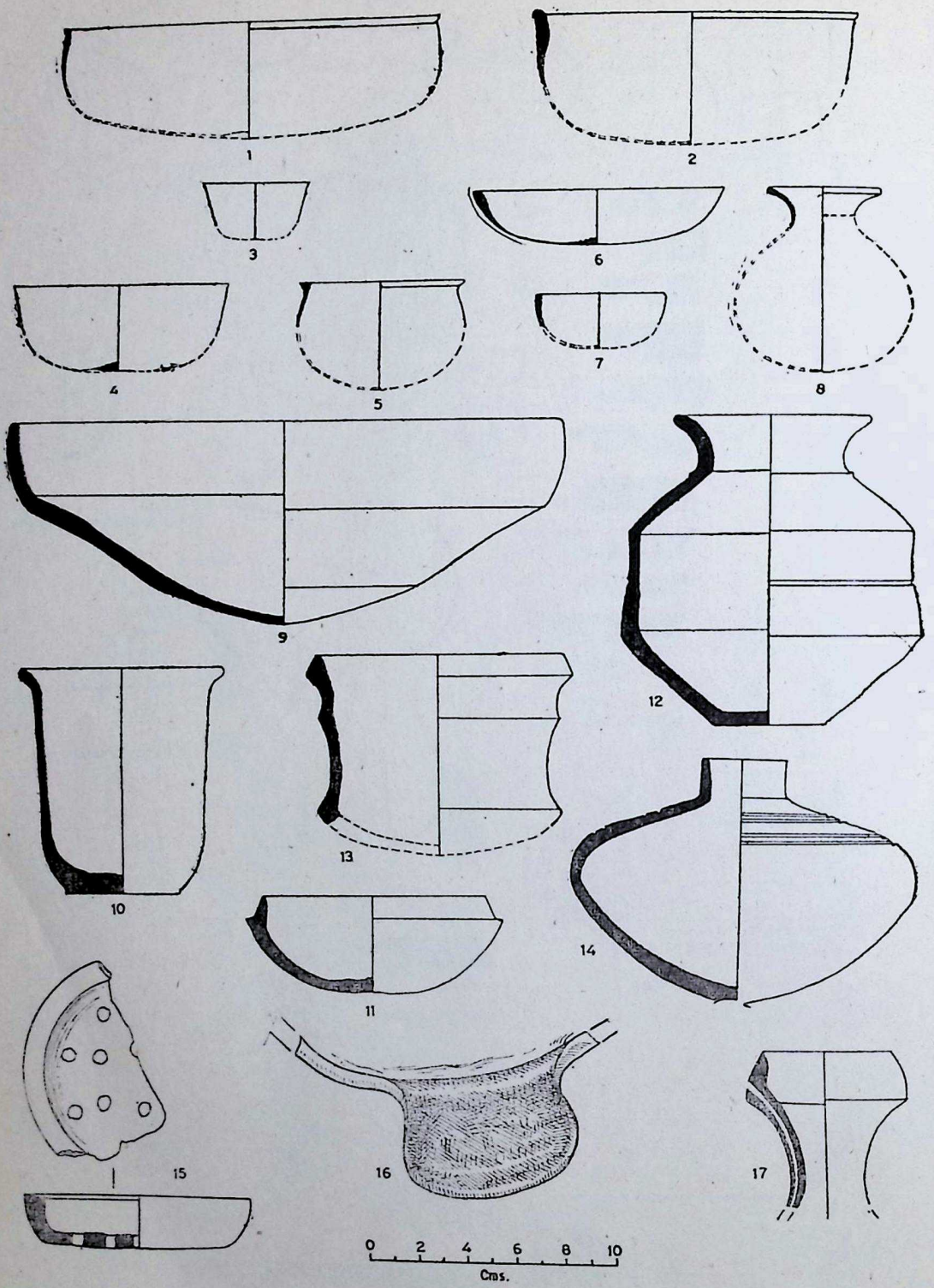

Fig. 26

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

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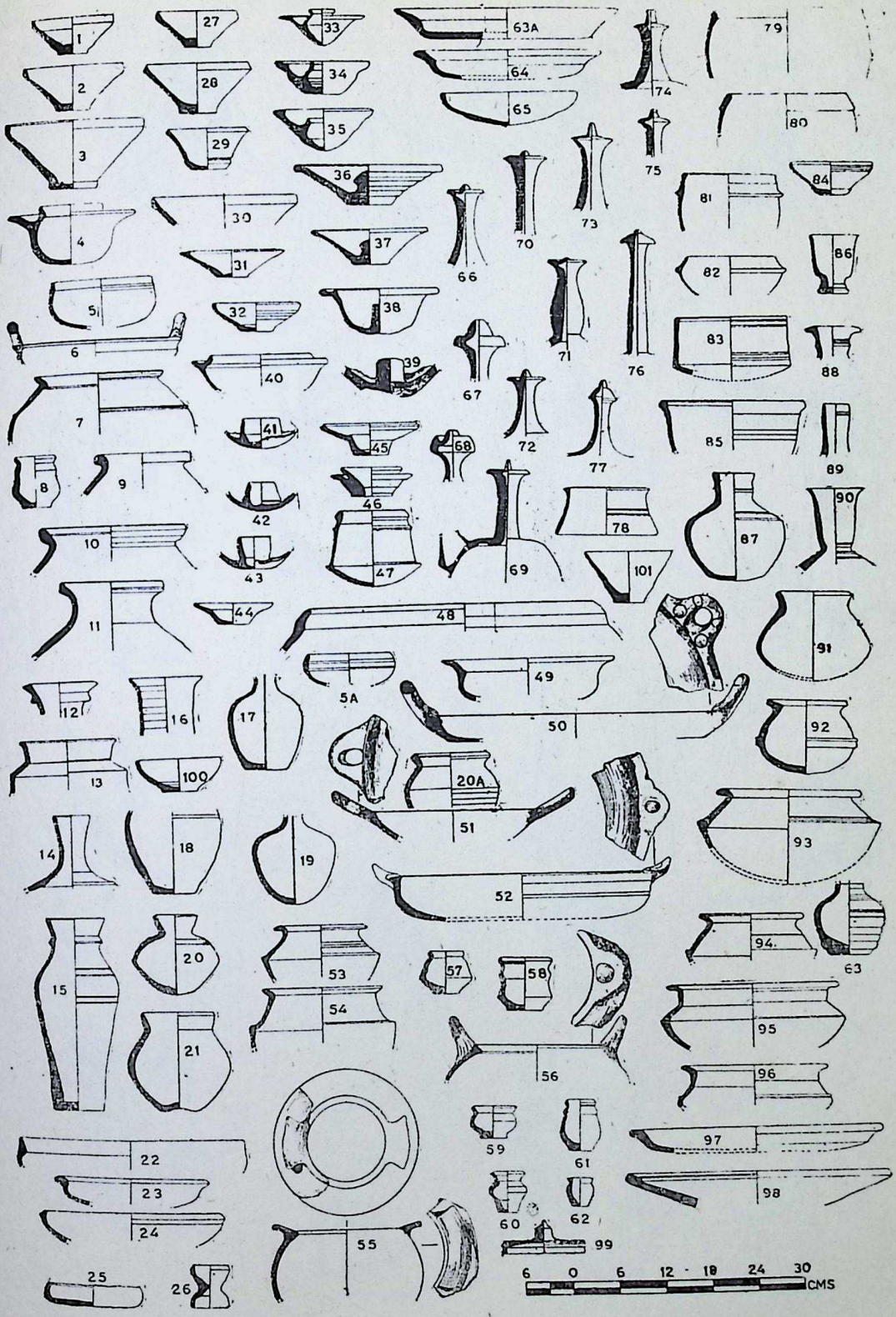

Fig. 27

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

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Fig. 28

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

Digitized by Arya Samaj Foundation Chennai and eGangotri

Fig. 29

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

Digitized by Arya Samaj Foundation Chennai and eGangotri

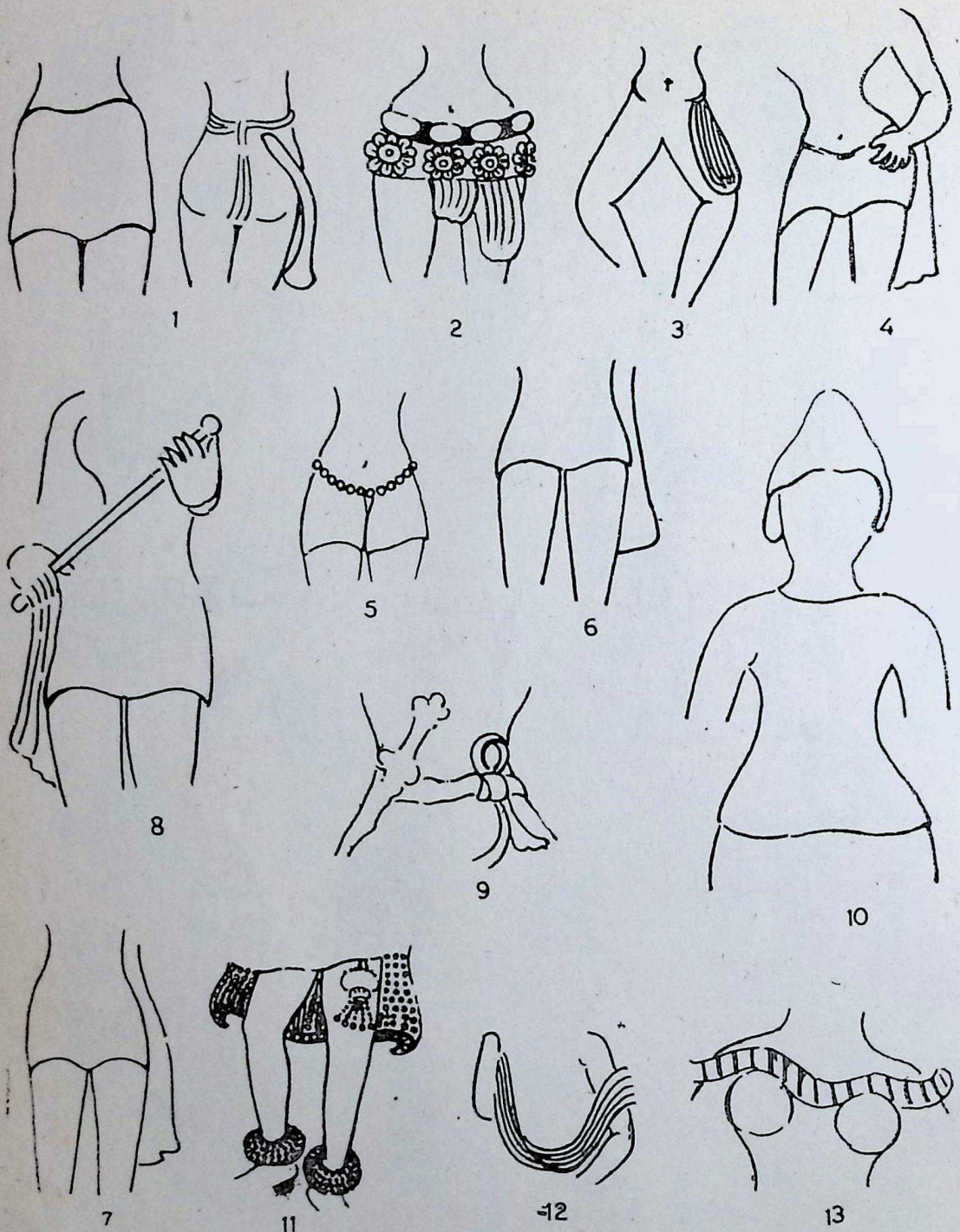

Fig. 30

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

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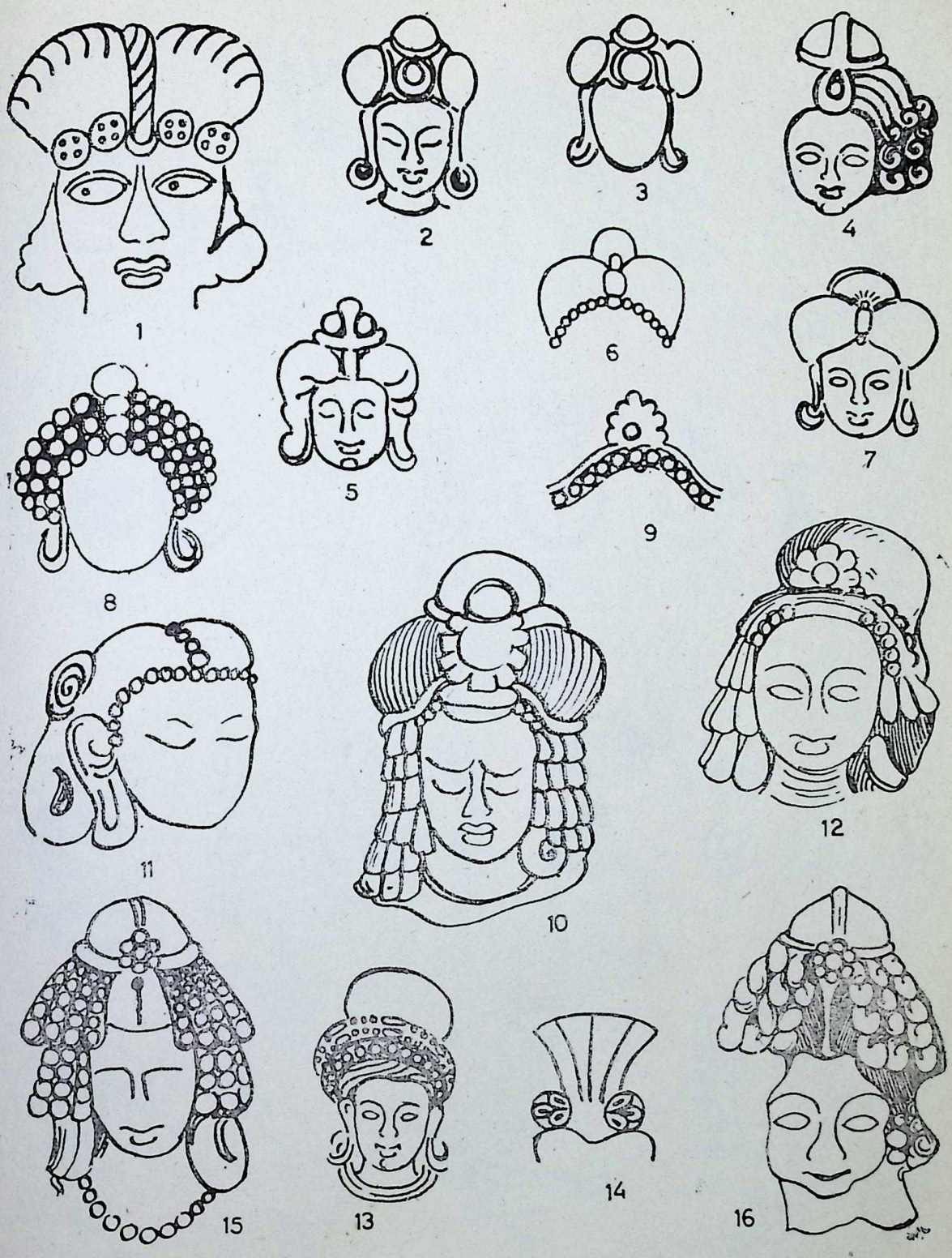

Fig. 31

CC-0. In Public Domain. Gurukul Kahgri Collection, Haridwar

Digitized by Arya Samaj Foundation Chennai and eGangotri

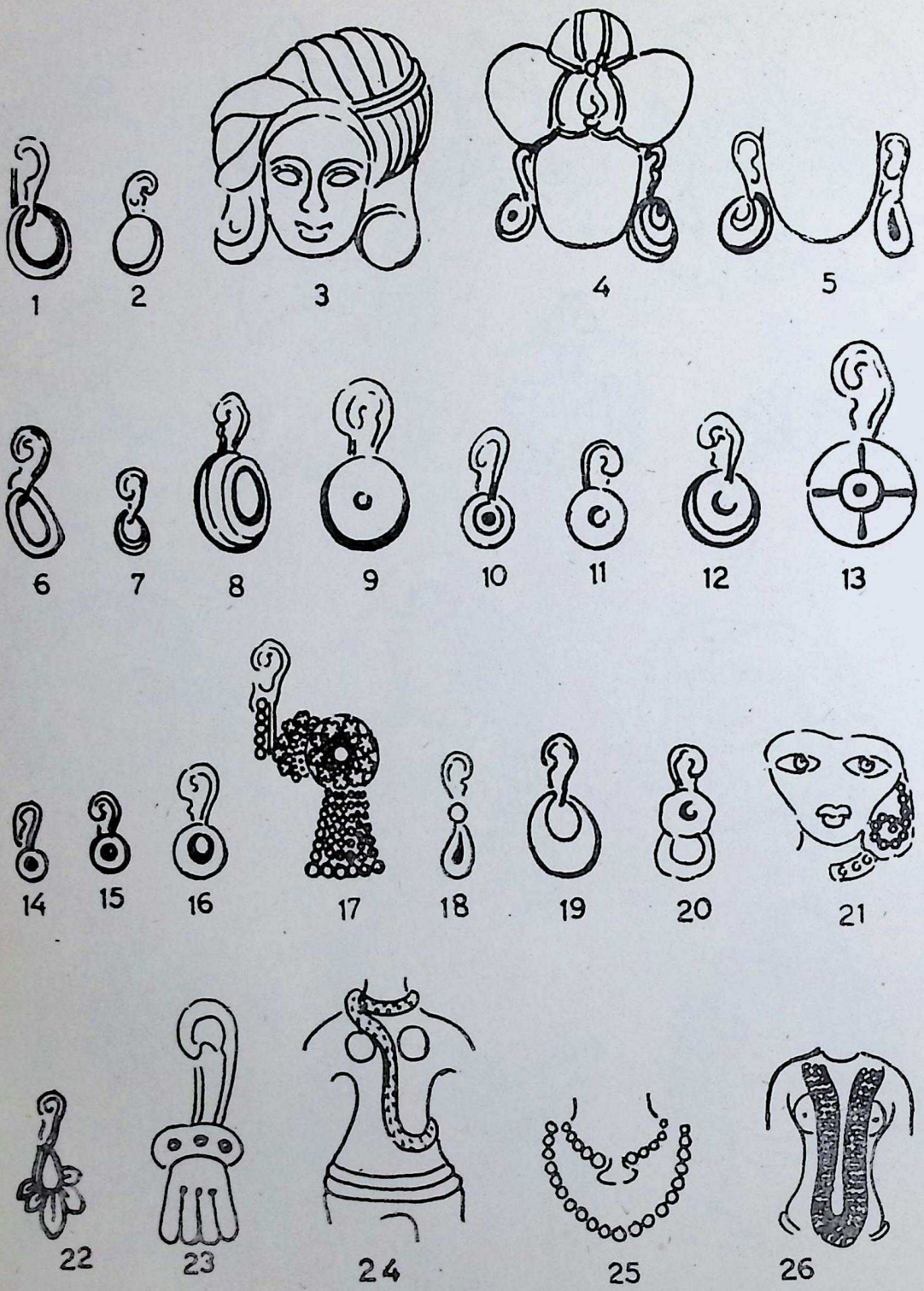

Fig. 32

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

Digitized by Arya Samaj Foundation Chennai and eGangotri

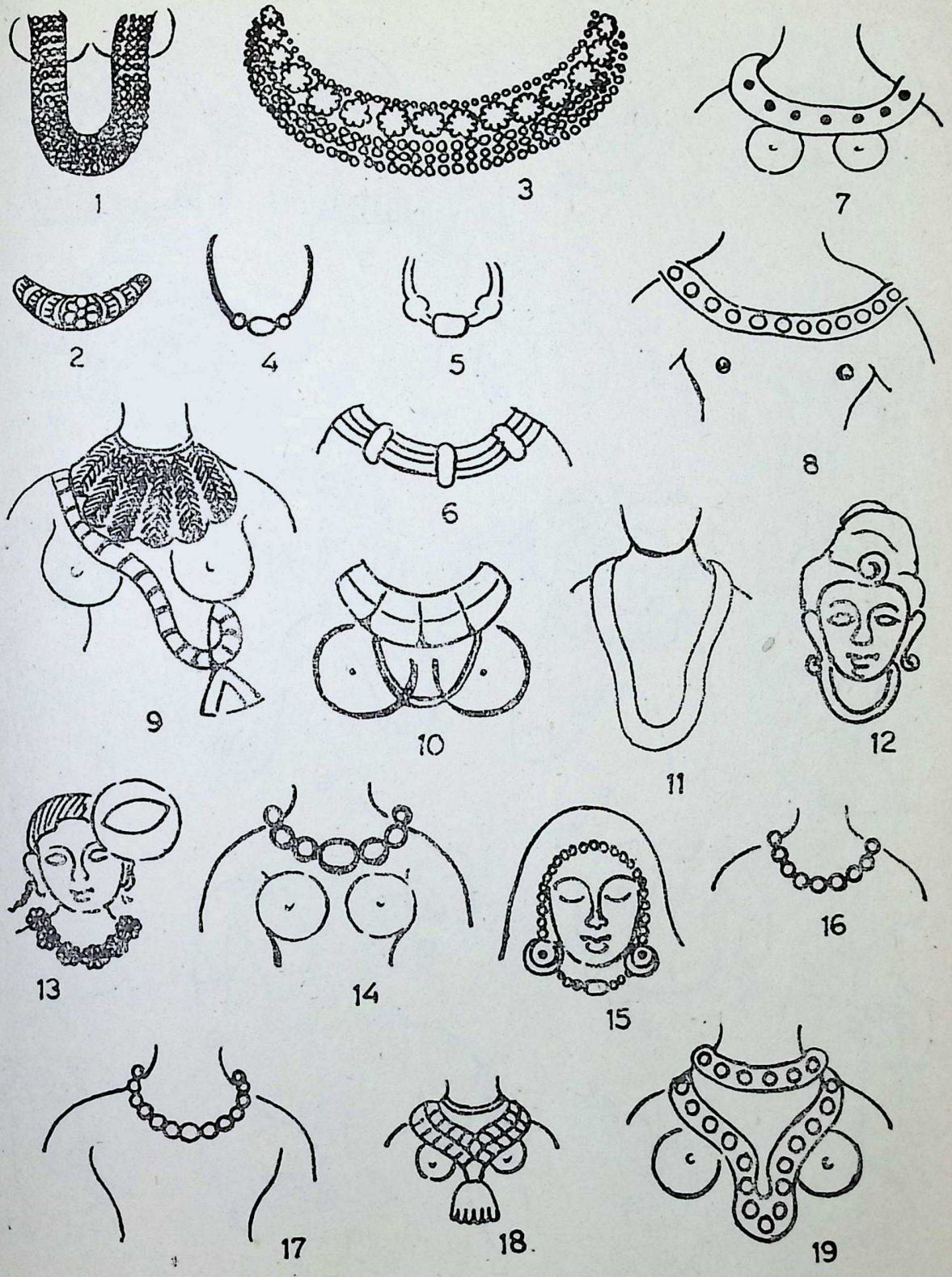

Fig. 33

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

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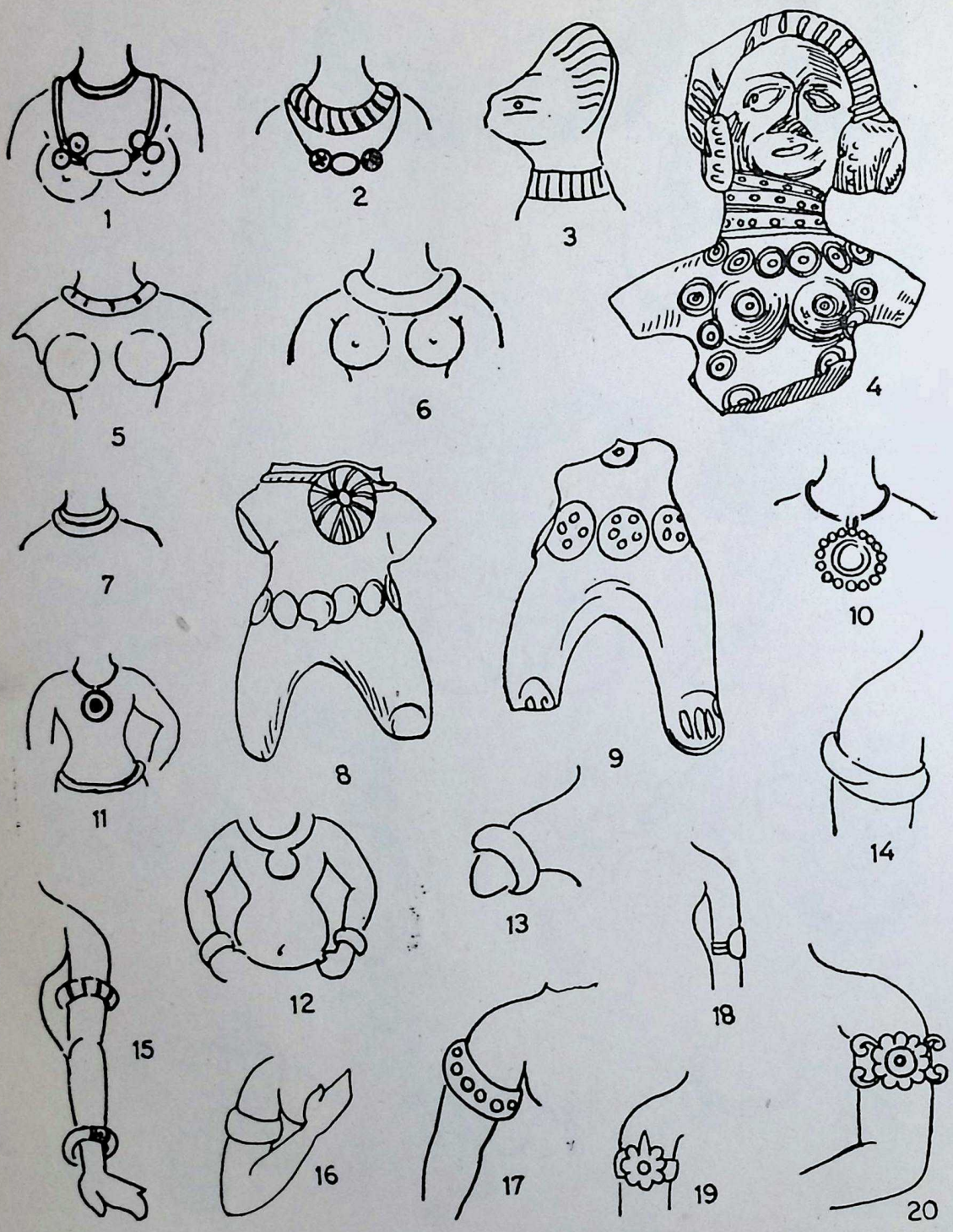

Fig. 34

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

Digitized by Arya Samaj Foundation Chennai and eGangotri

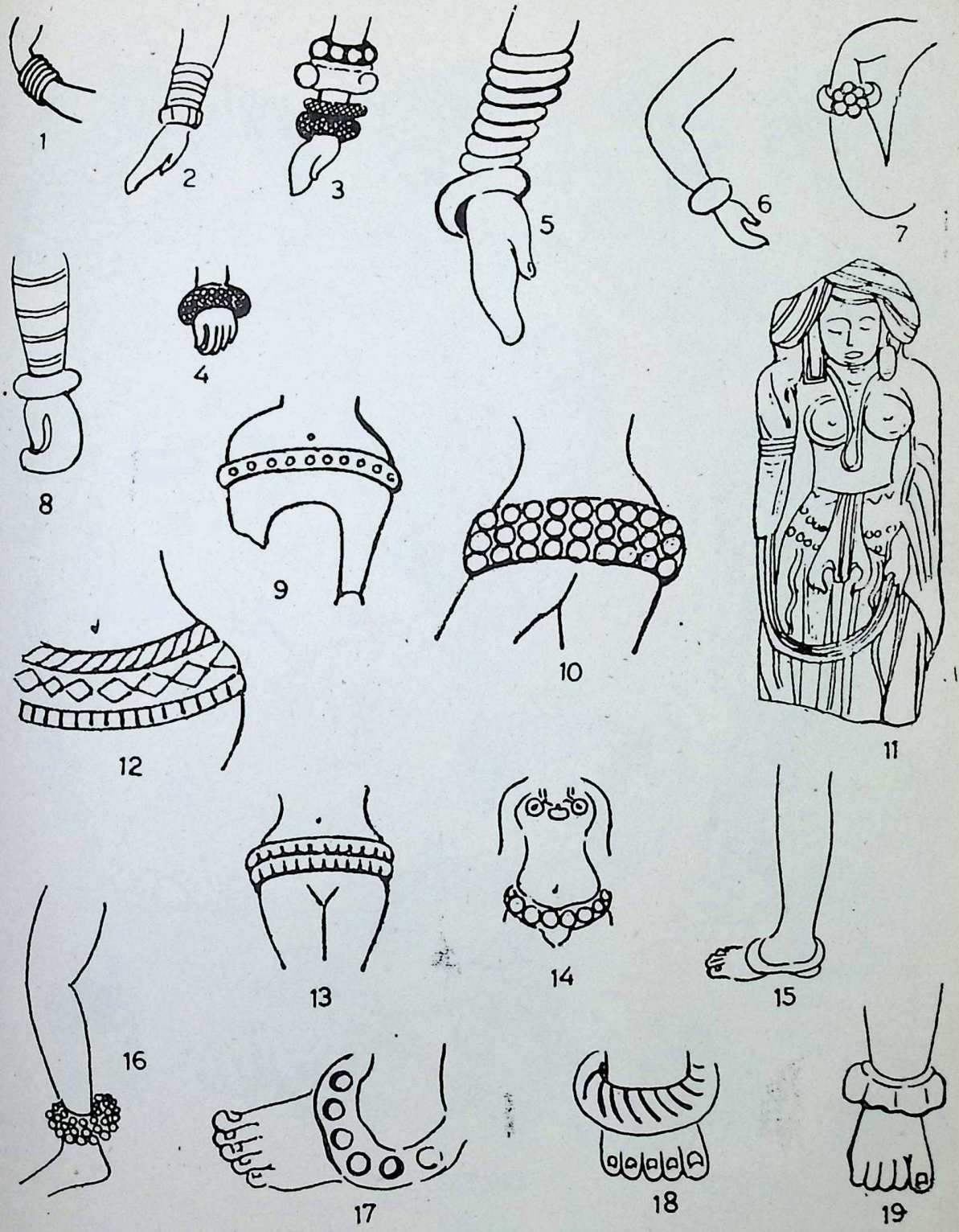

Fig. 35

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

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Fig. 36

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

Digitized by Arya Samaj Foundation Chennai and eGangotri

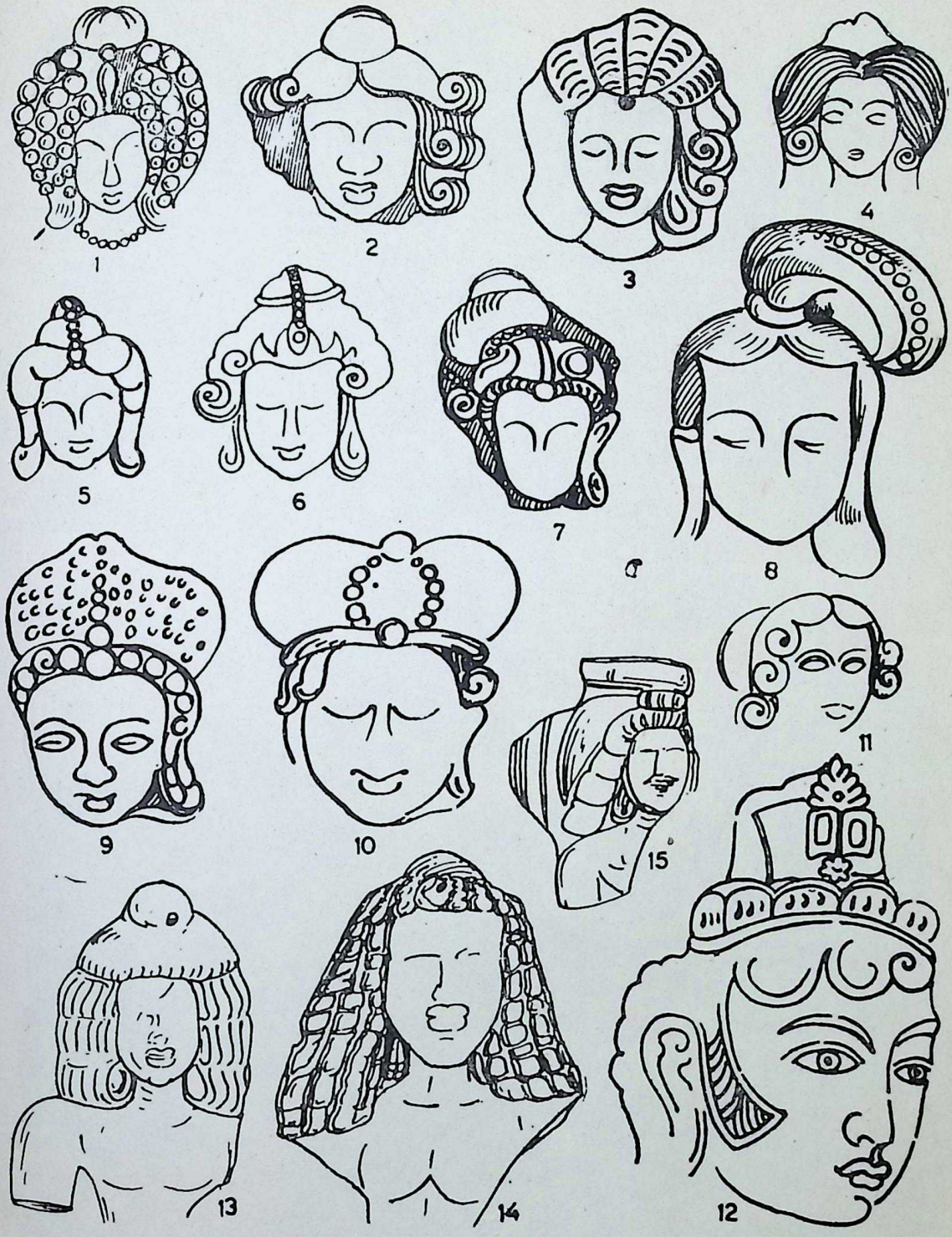

Fig. 37

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

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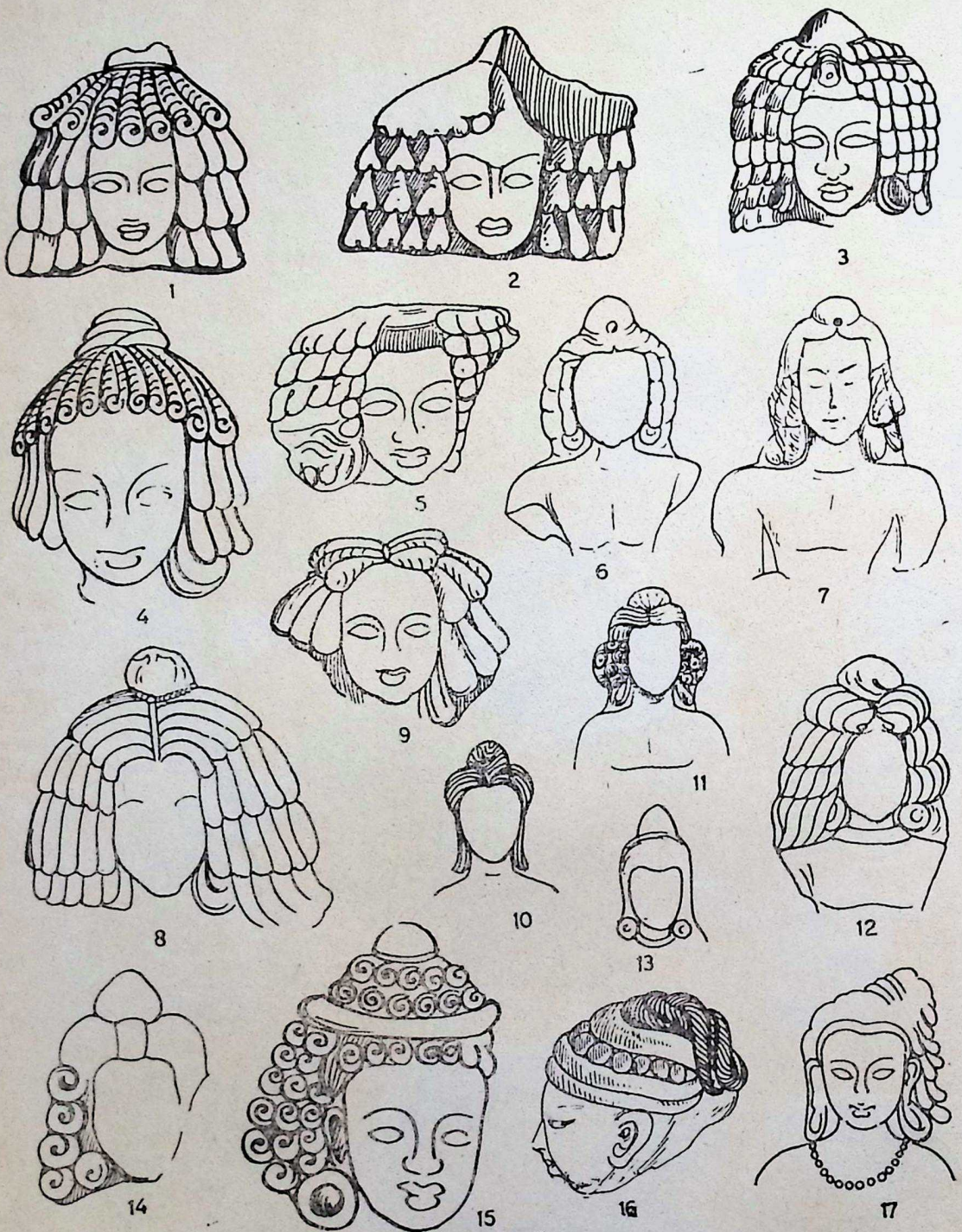

Fig. 38

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PLATE No. 1 (A)

PLATE No. I (B)

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

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PLATE No. II (A)

PLATE No. II (B)

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

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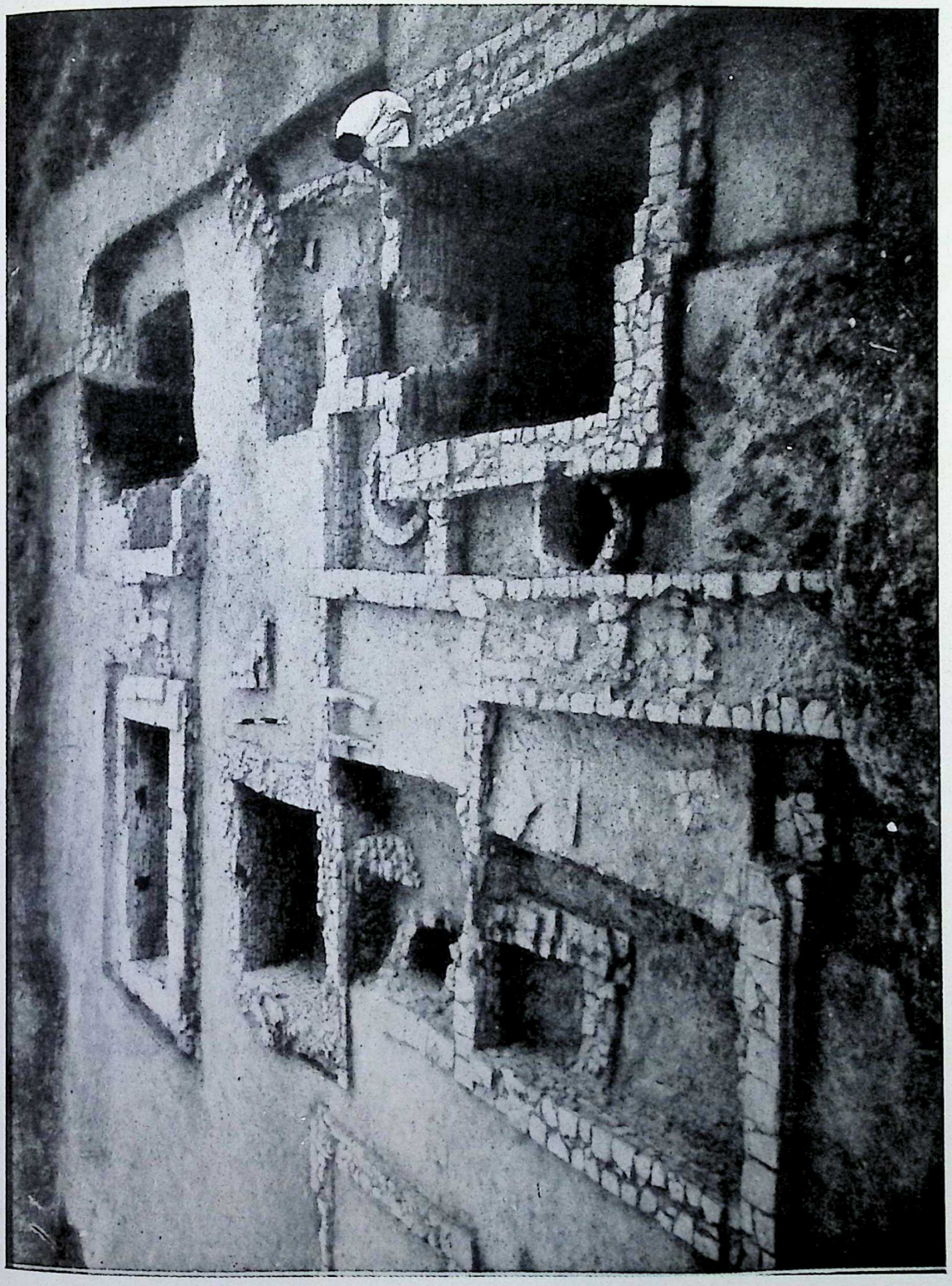

PLATE No. III (A)

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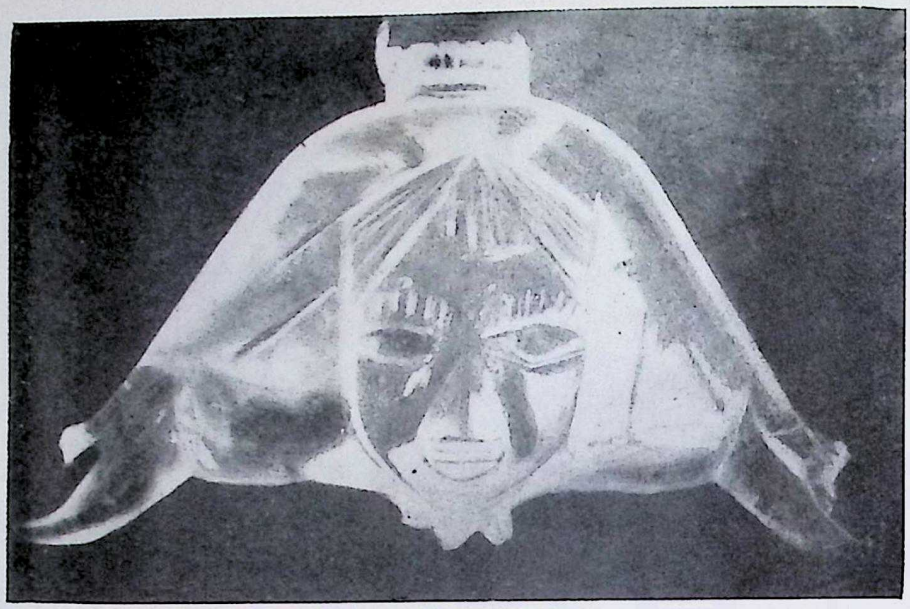

PLATE No. III (B)

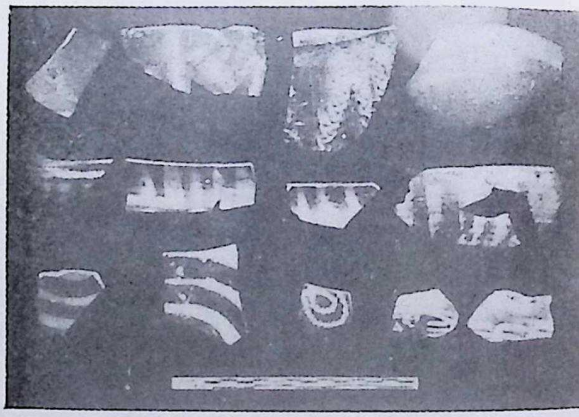

PLATE No. IV (B)

PLATE No. IV (A)

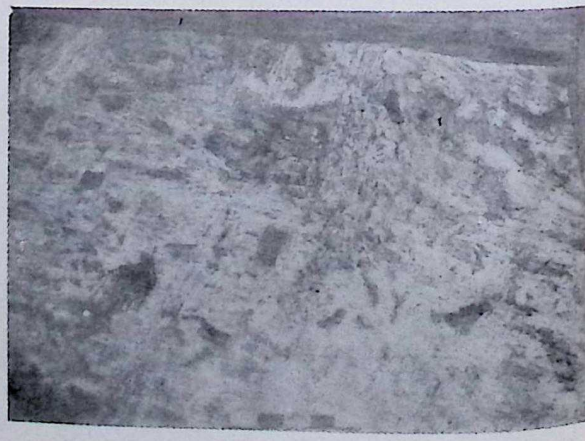

PLATE No. IV (C)

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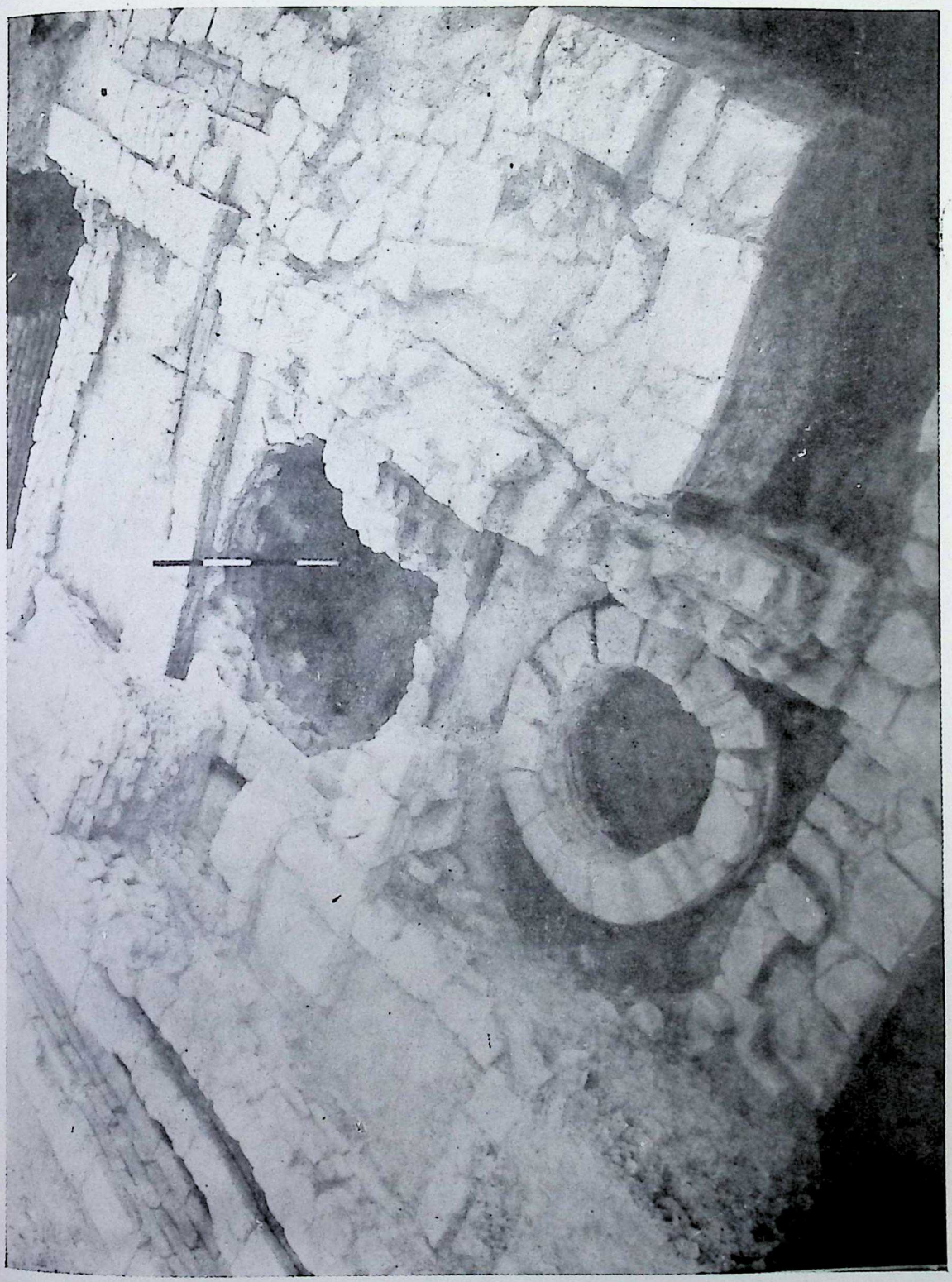

PLATE No. V

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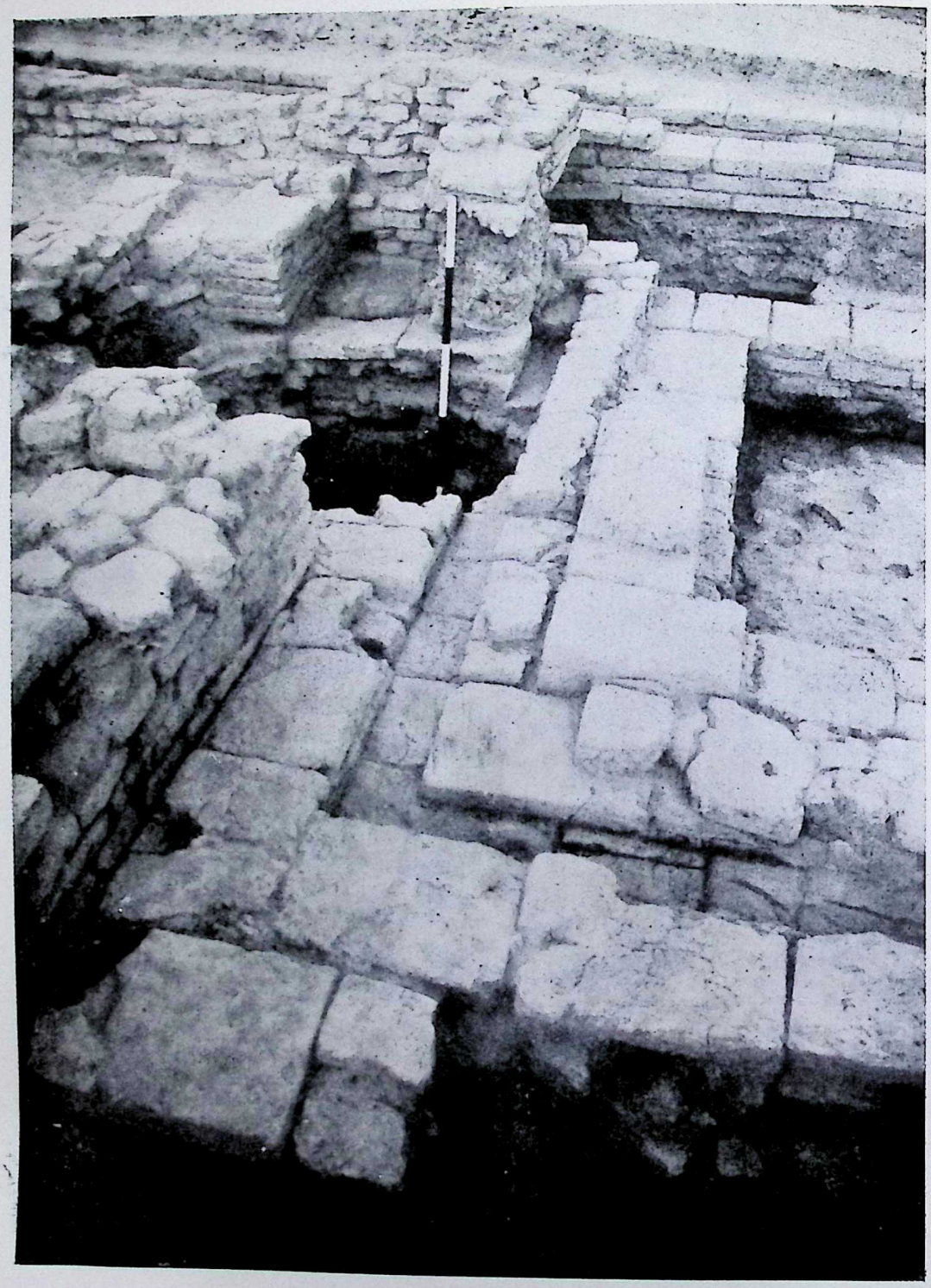

PLATE No. VI

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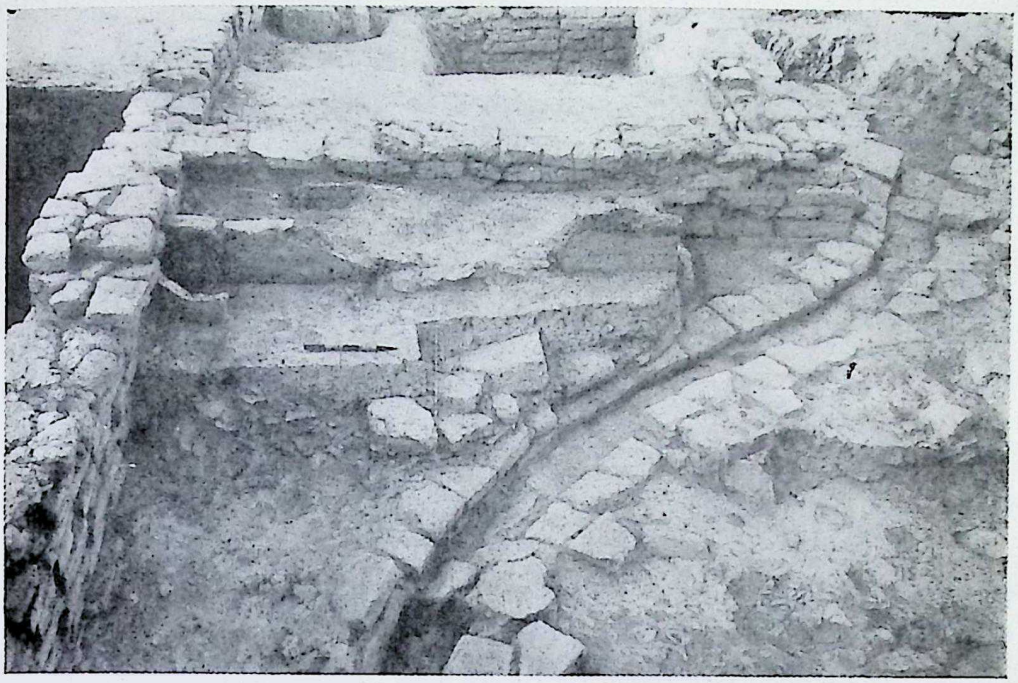

PLATE No. VII

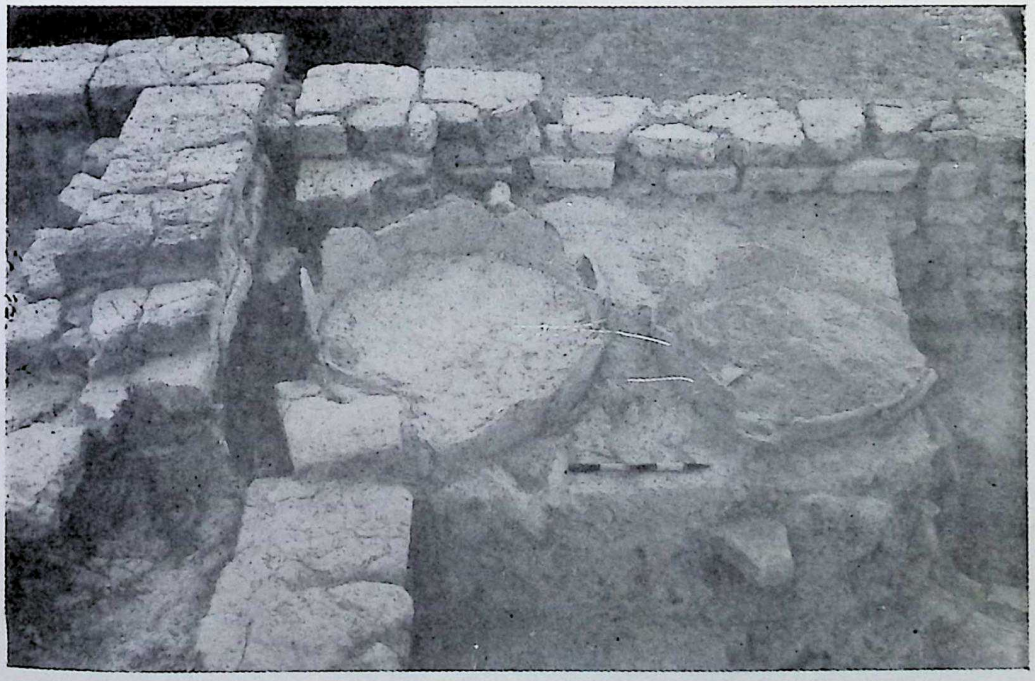

PLATE No. VIII

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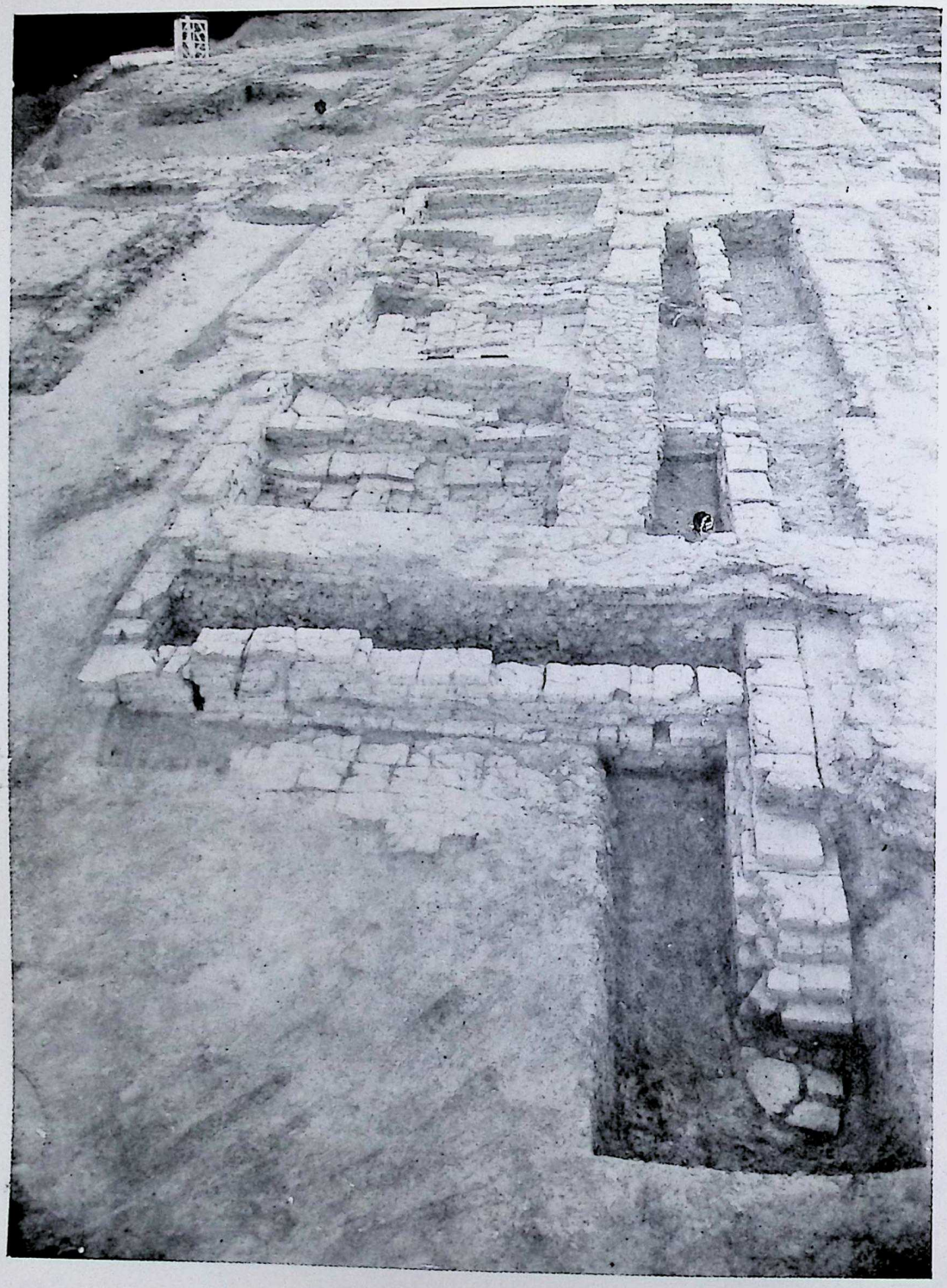

PLATE No. IX

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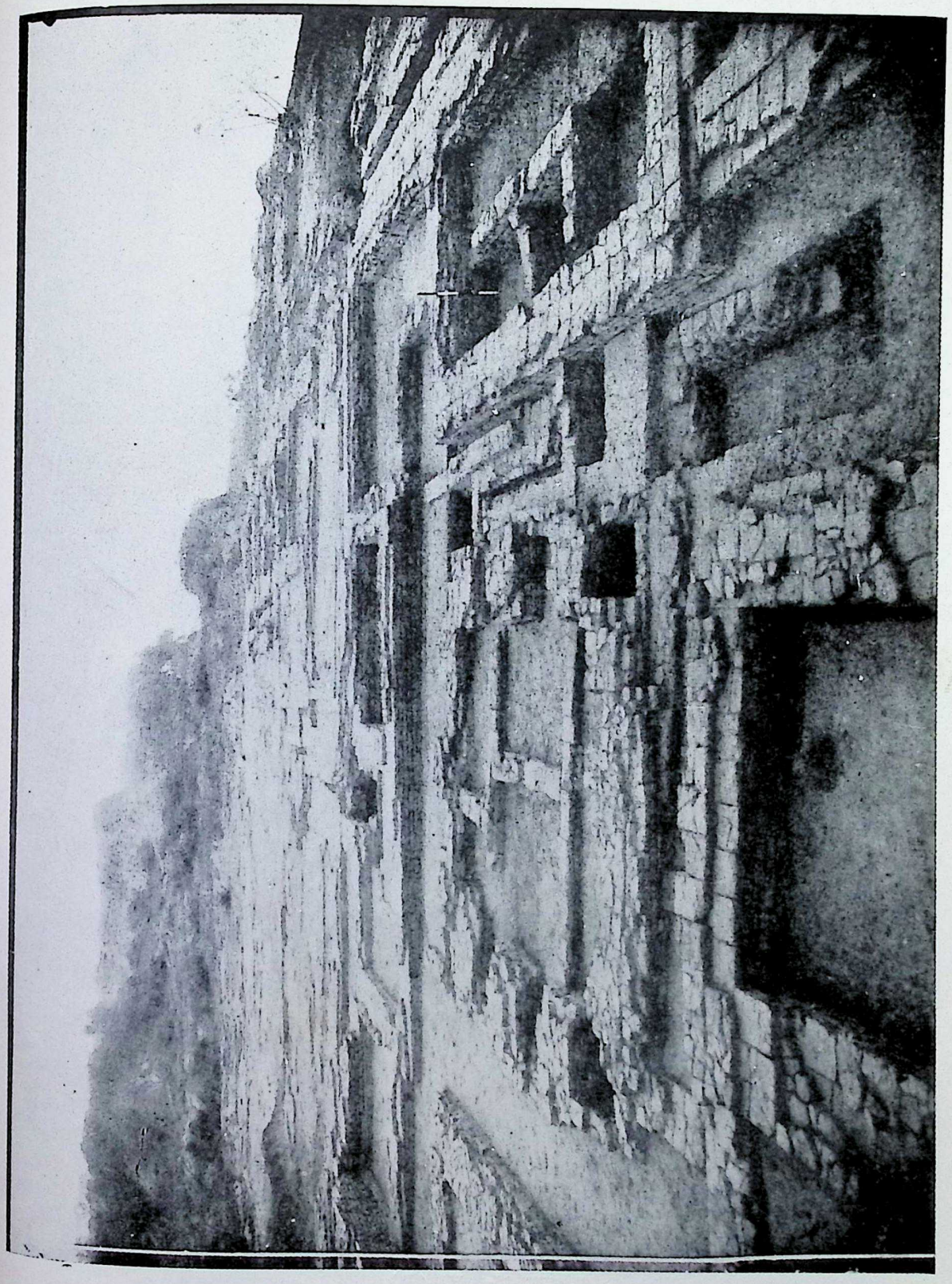

PLATE No. X

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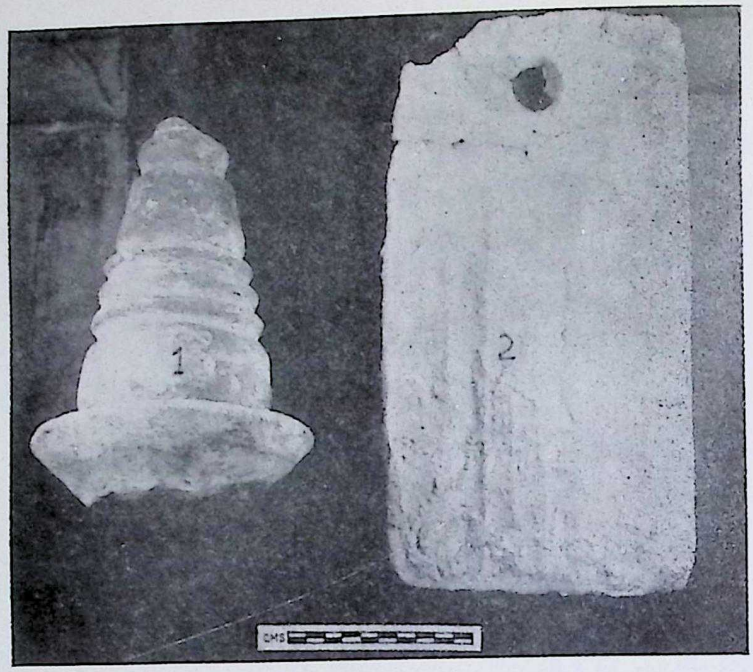

PLATE No. XI (A)

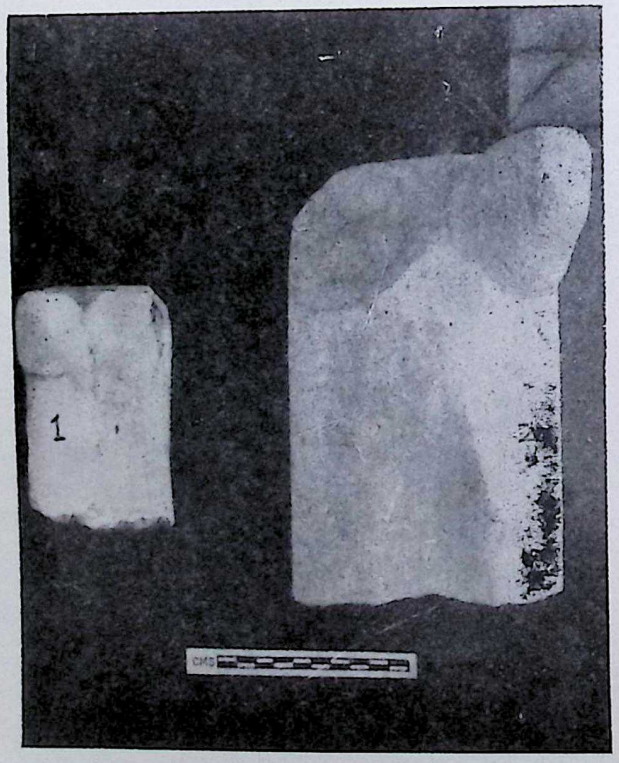

PLATE No. XI (B)

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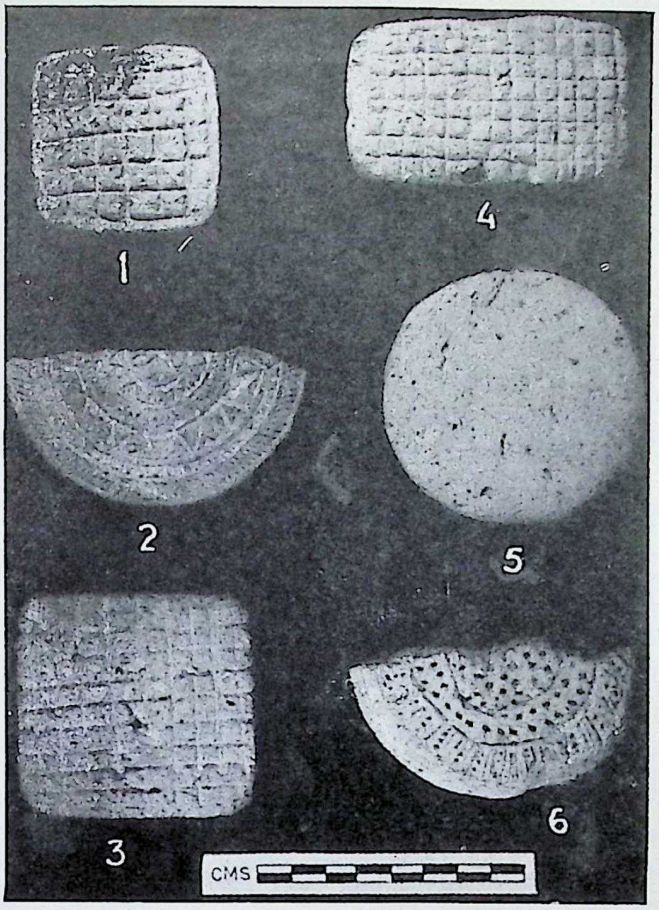

PLATE No. XII (A)

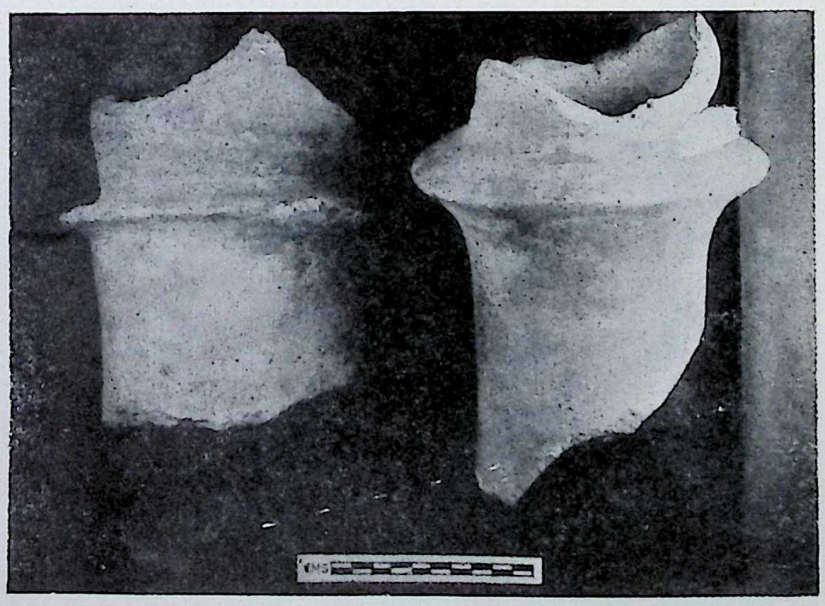

PLATE No. XII (B)

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

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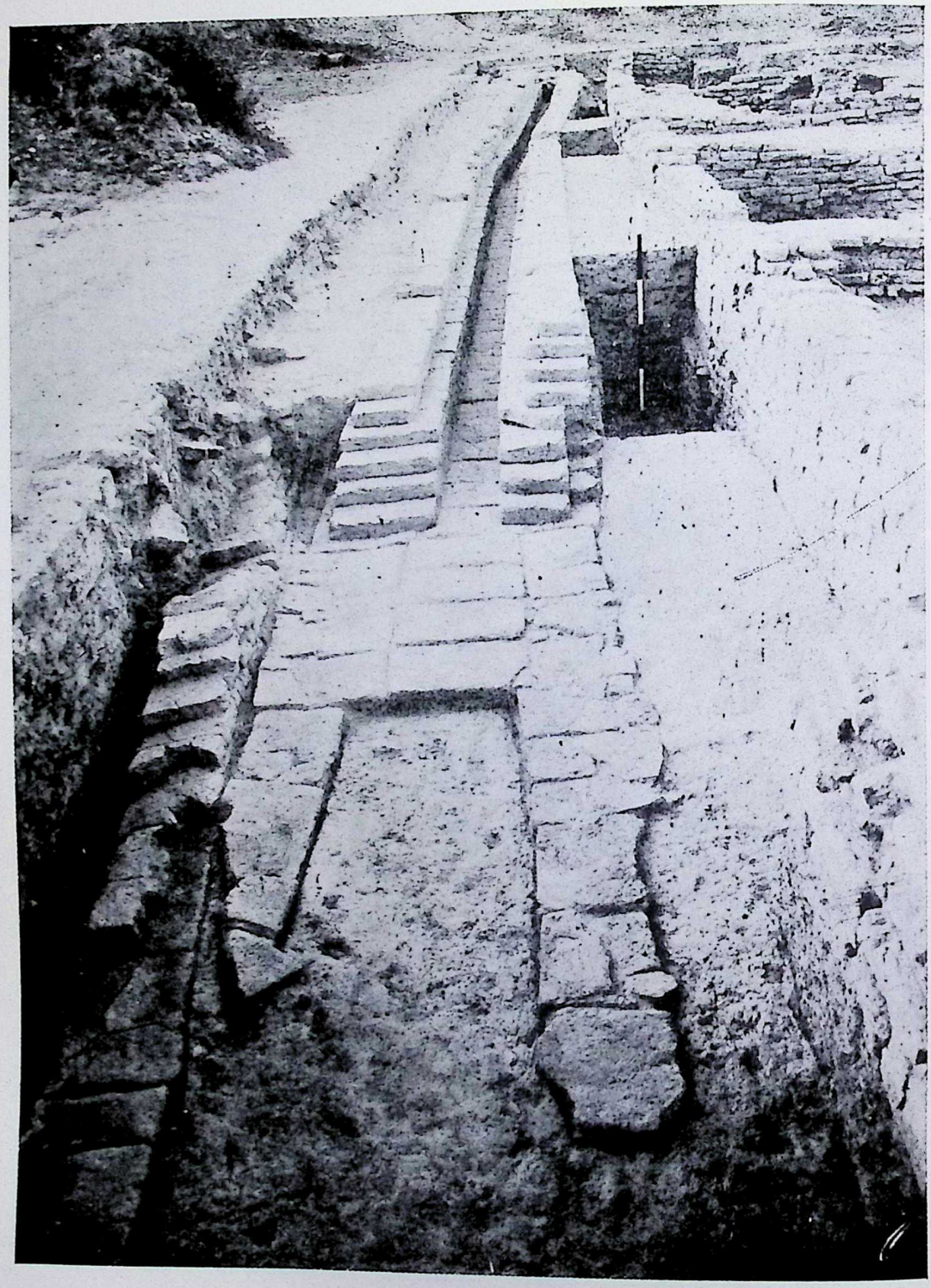

PLATE No. XIII

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

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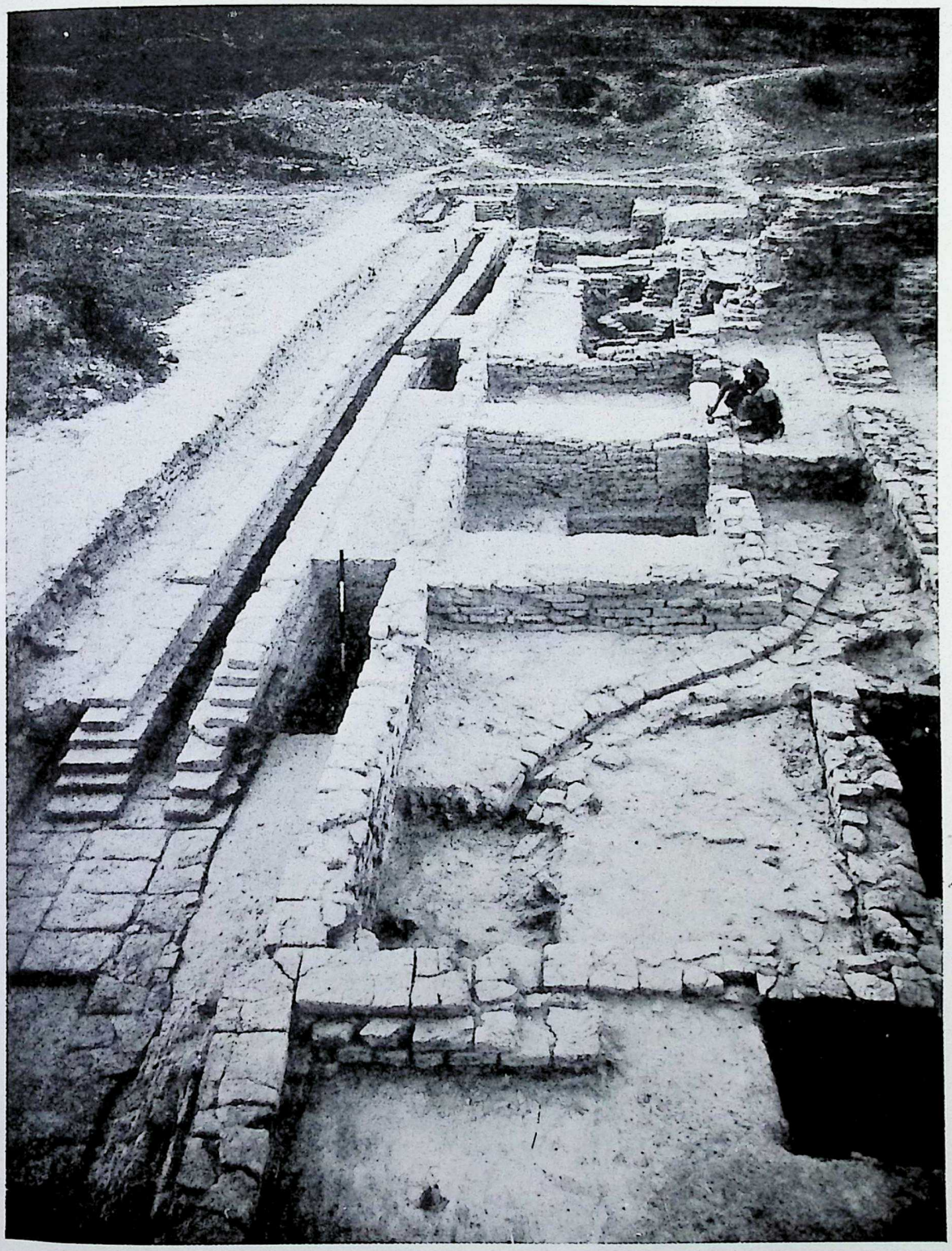

PLATE No. XIV

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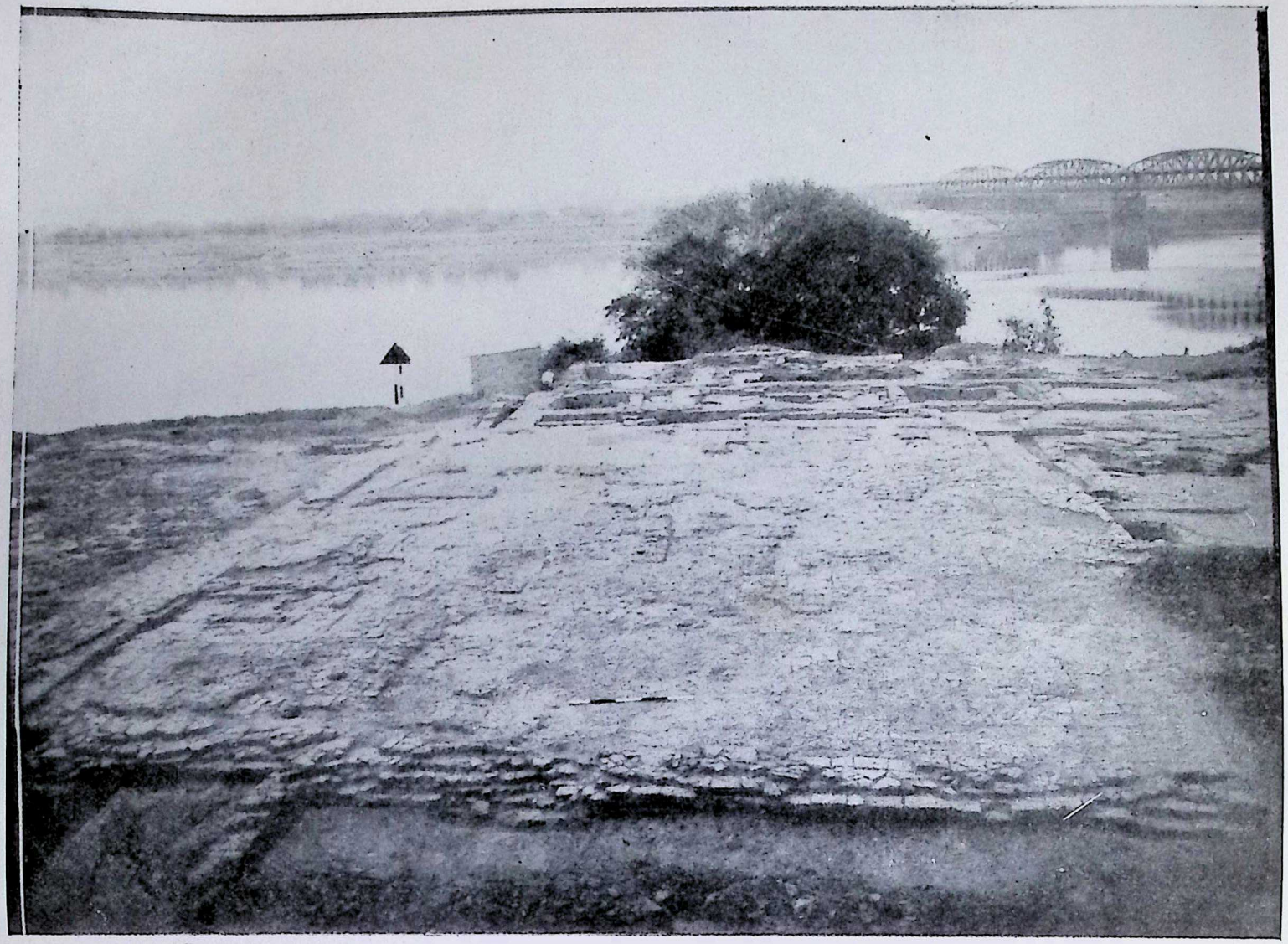

PLATE No. XV

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Digitized by Arya Samaj Foundation Chennai and eGangotri

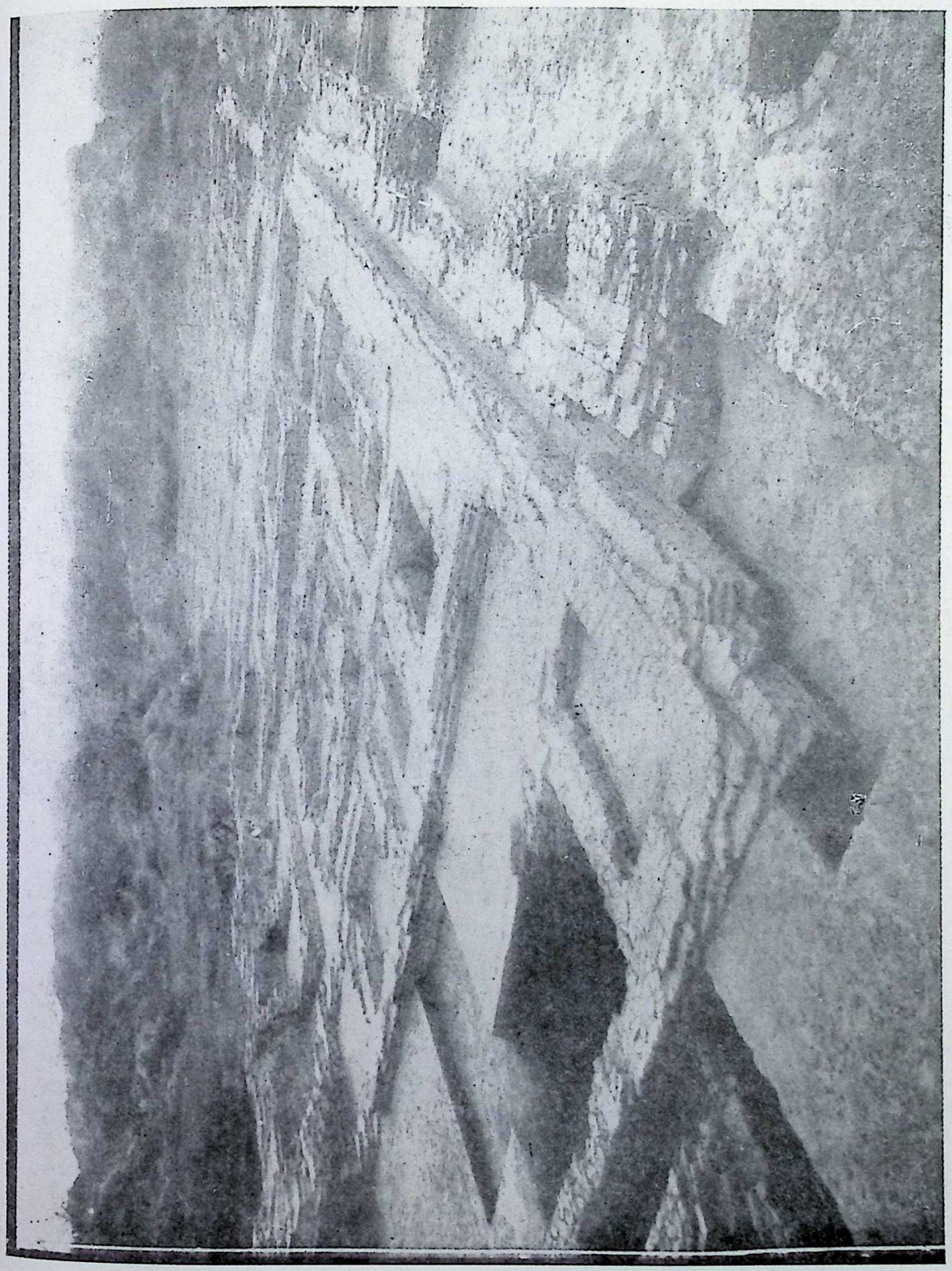

PLATE No. XVI

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

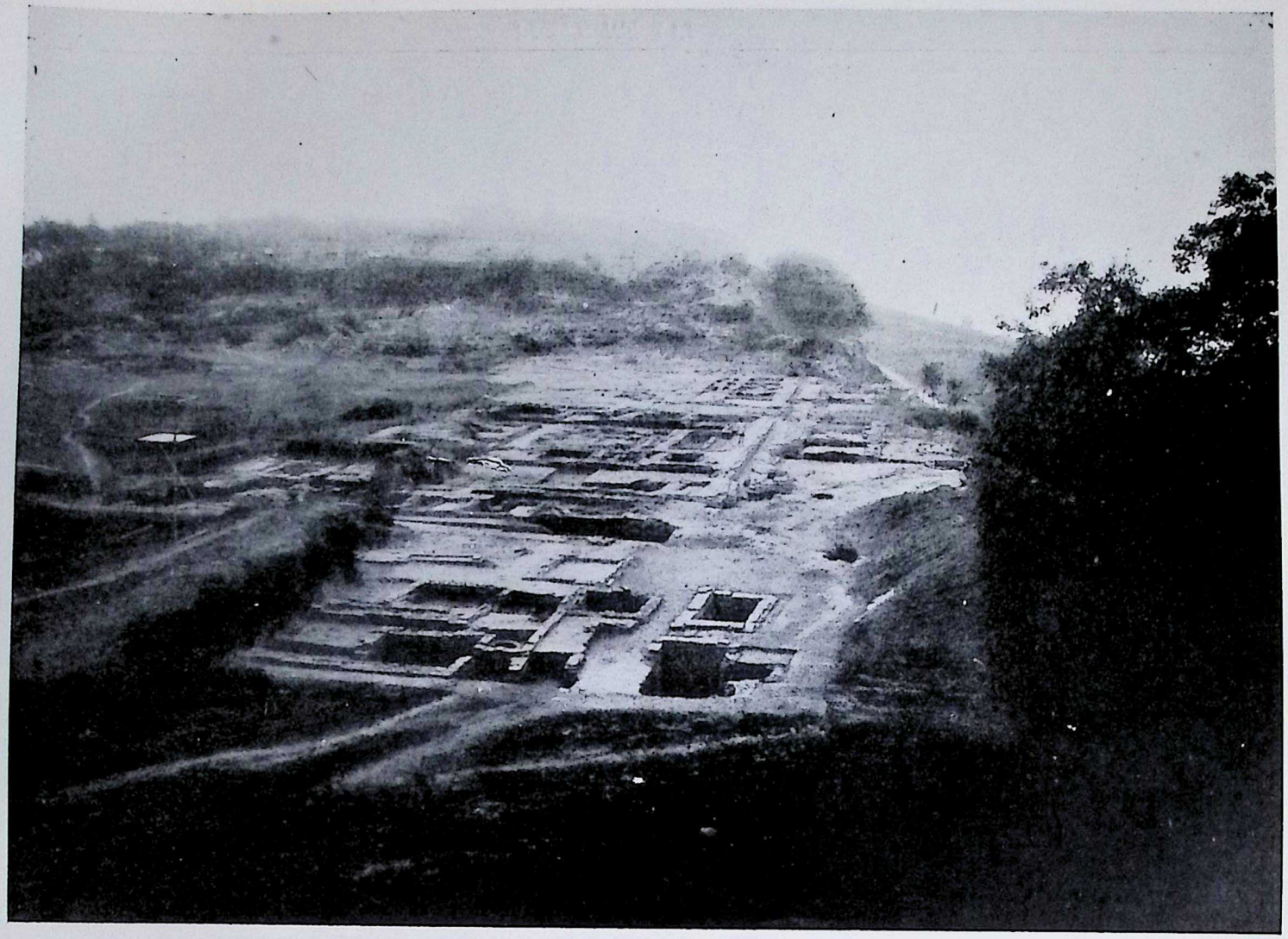

PLATE No. XVII

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Digitized by Arya Samaj Foundation Chennai and eGangotri

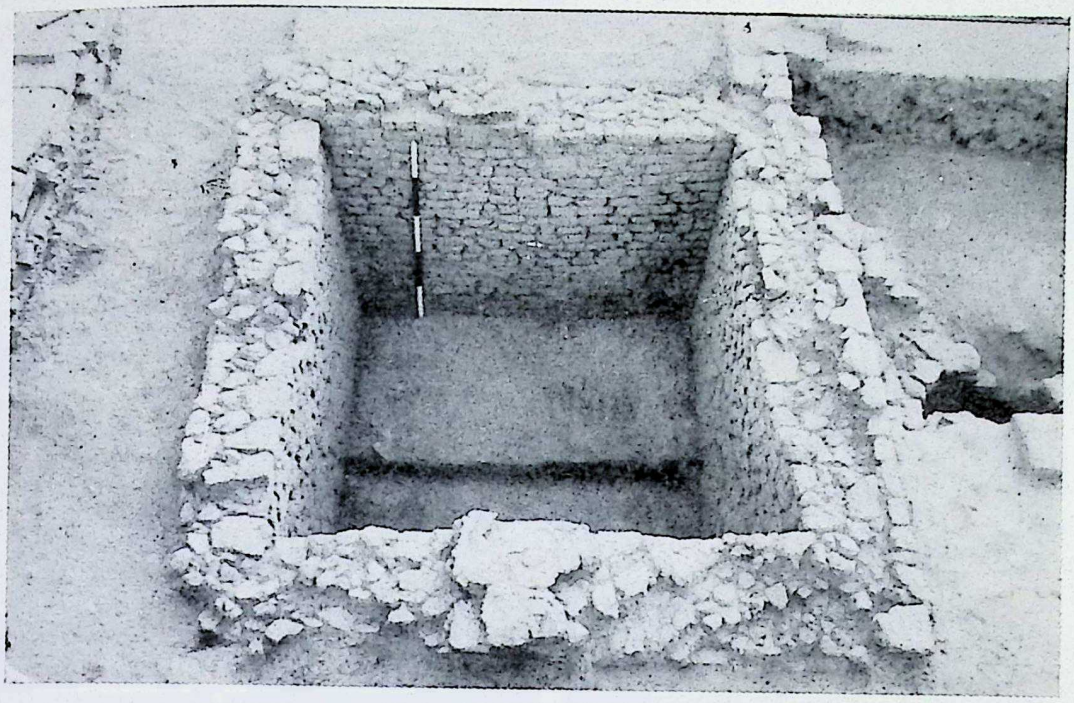

PLATE No. XVIII (A)

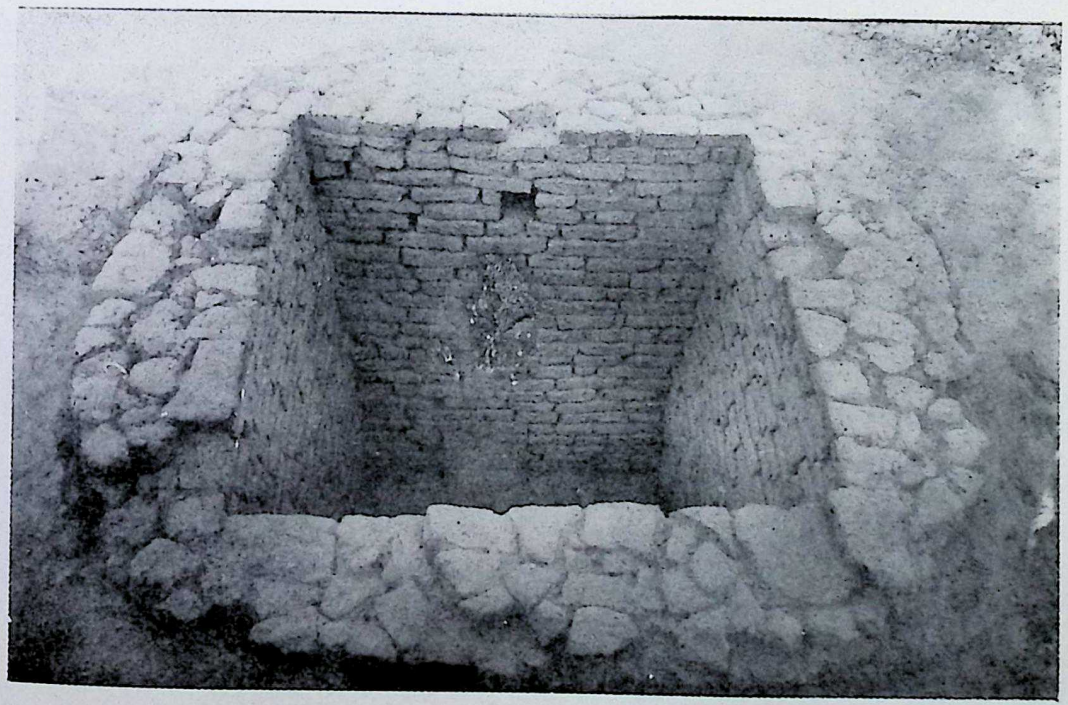

PLATE No. XVIII (B)

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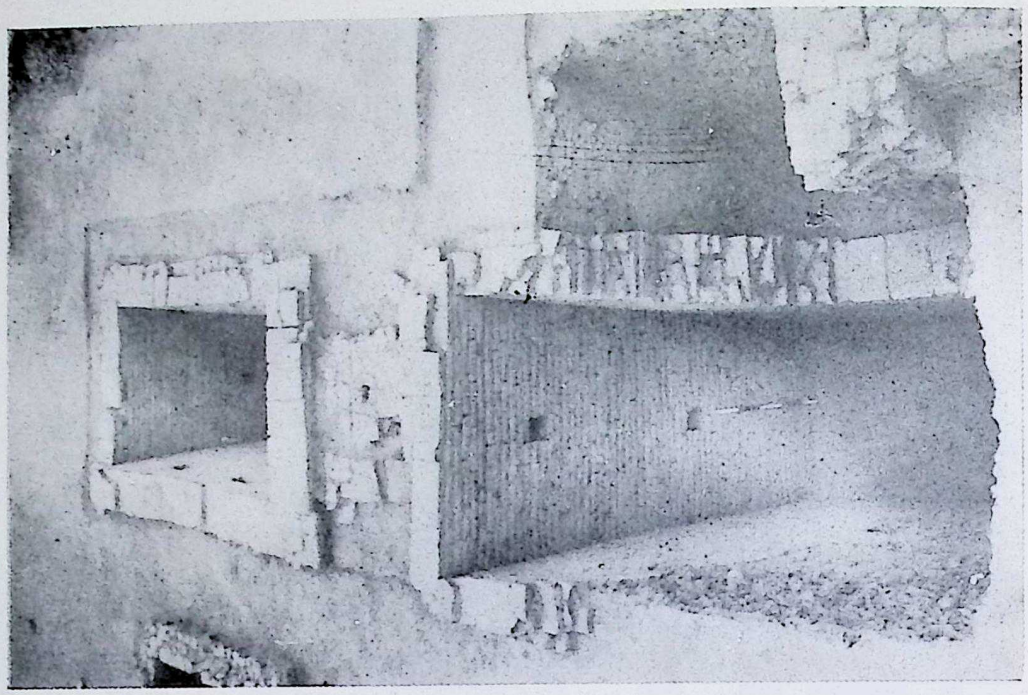

PLATE No. XIX (A)

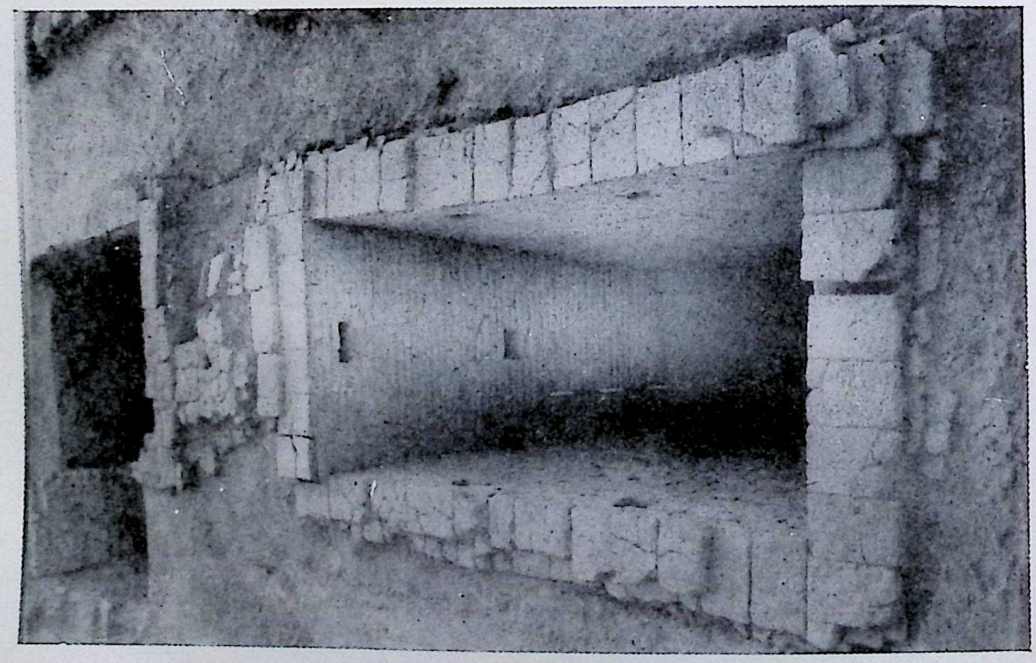

PLATE No. XIX (B)

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

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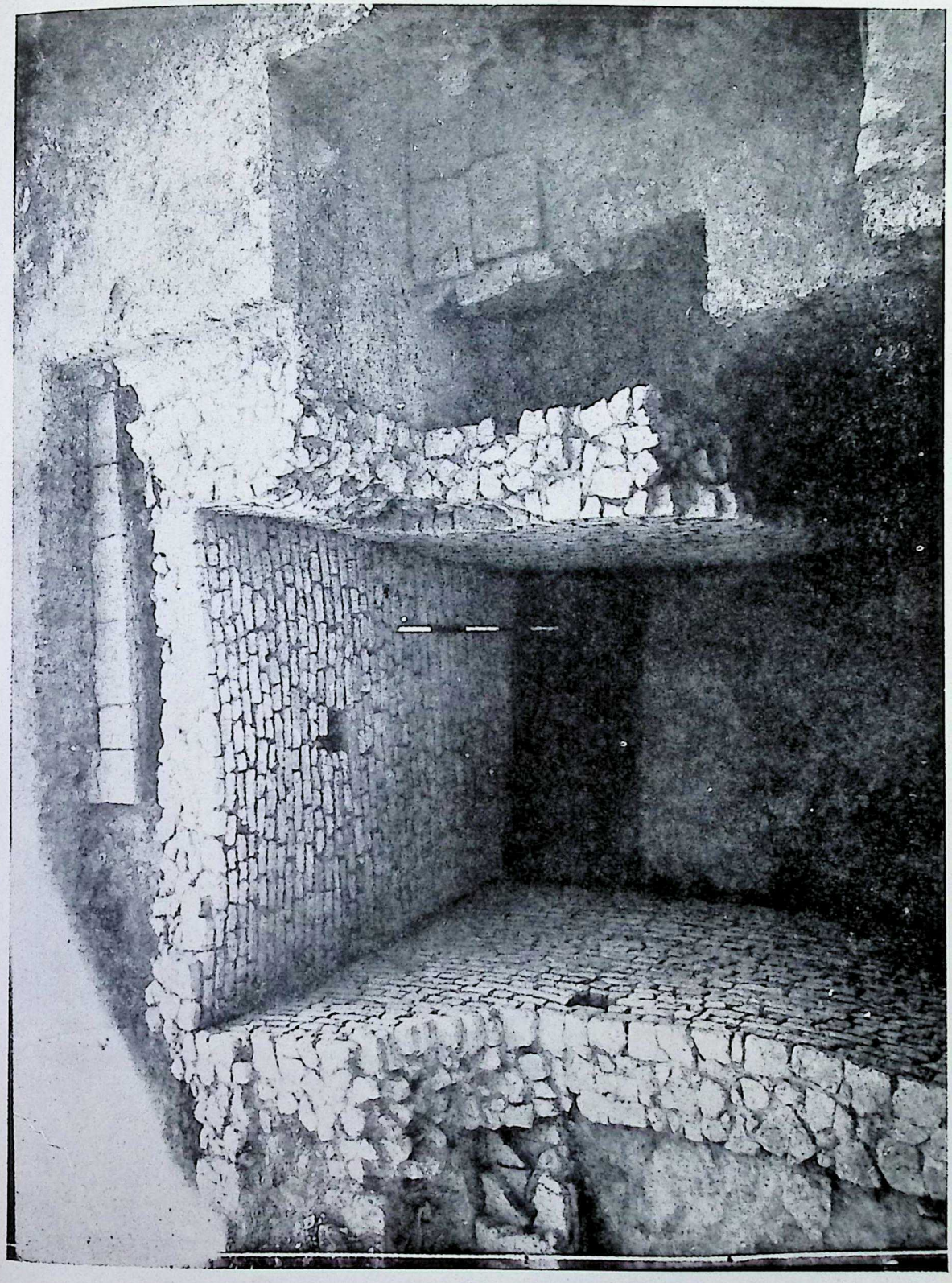

PLATE No. XX

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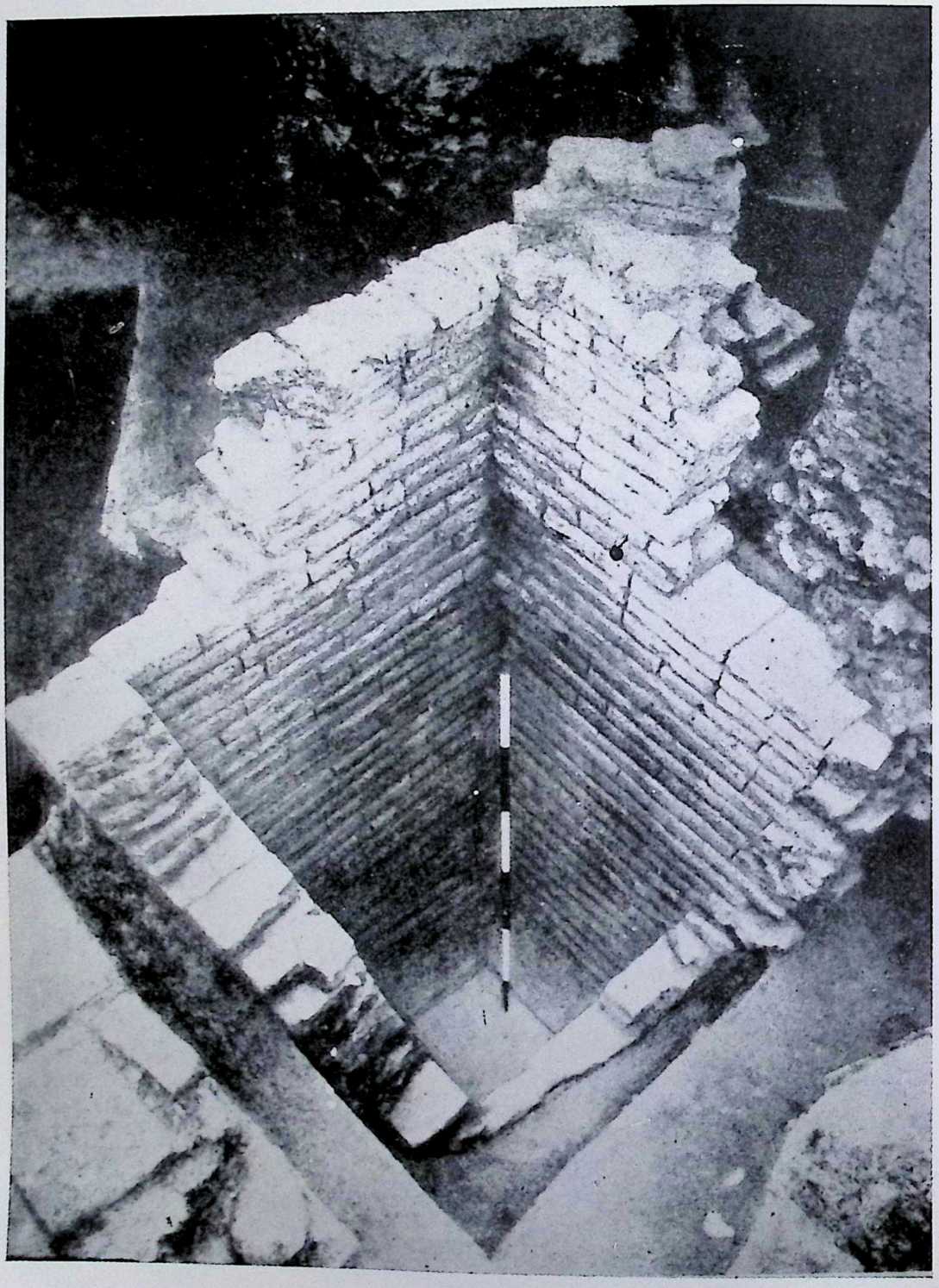

PLATE No. XXI

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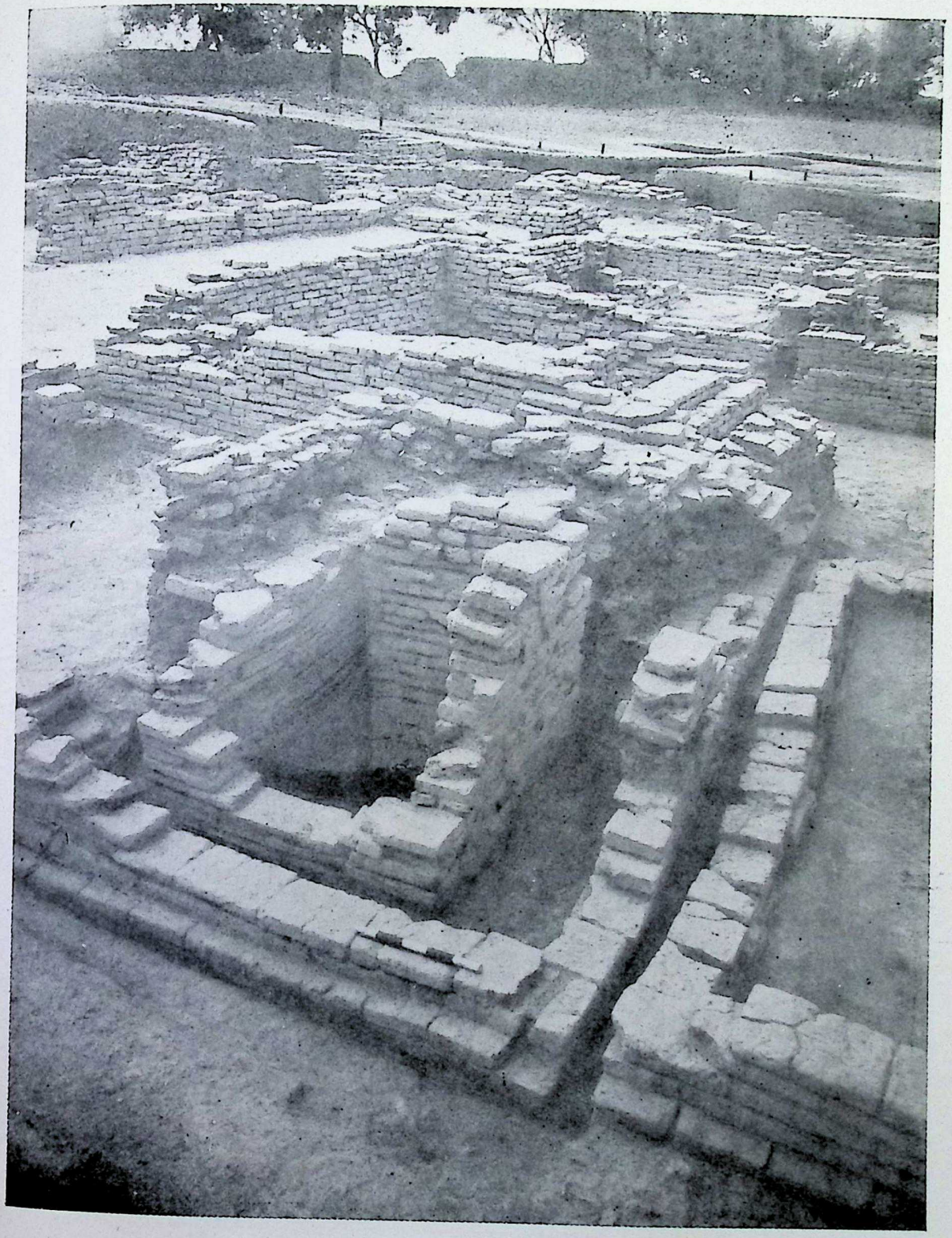

PLATE No. XXII

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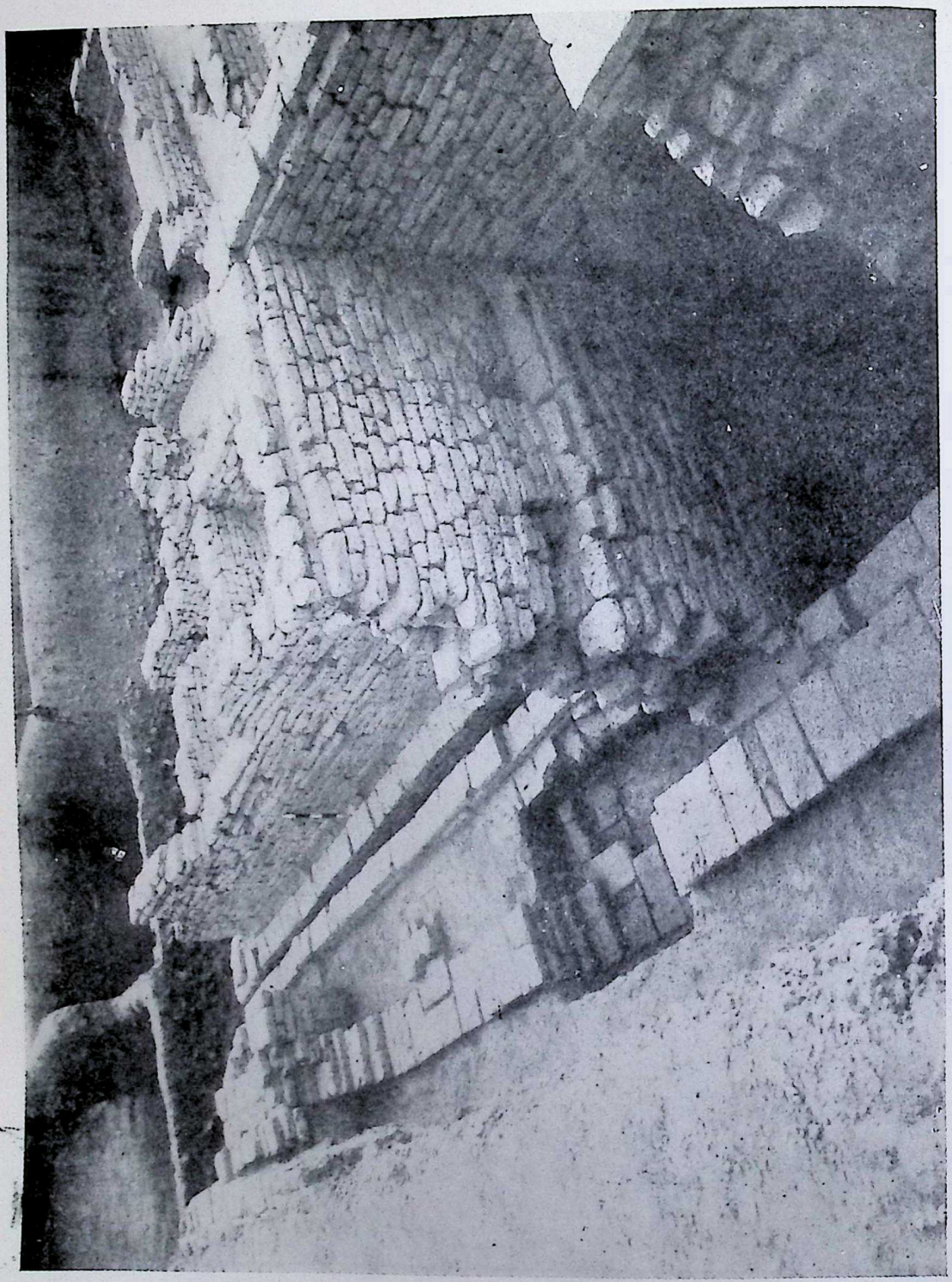

PLATE No. XXIII

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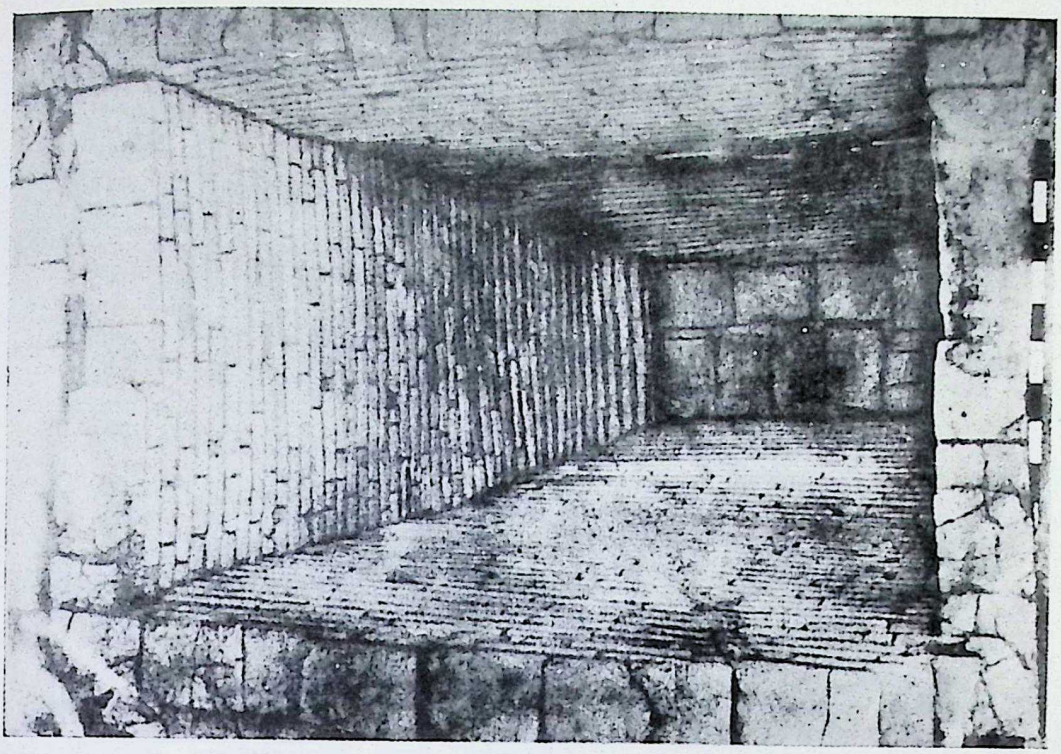

PLATE No. XXIV (A)

PLATE No. XXIV (B)

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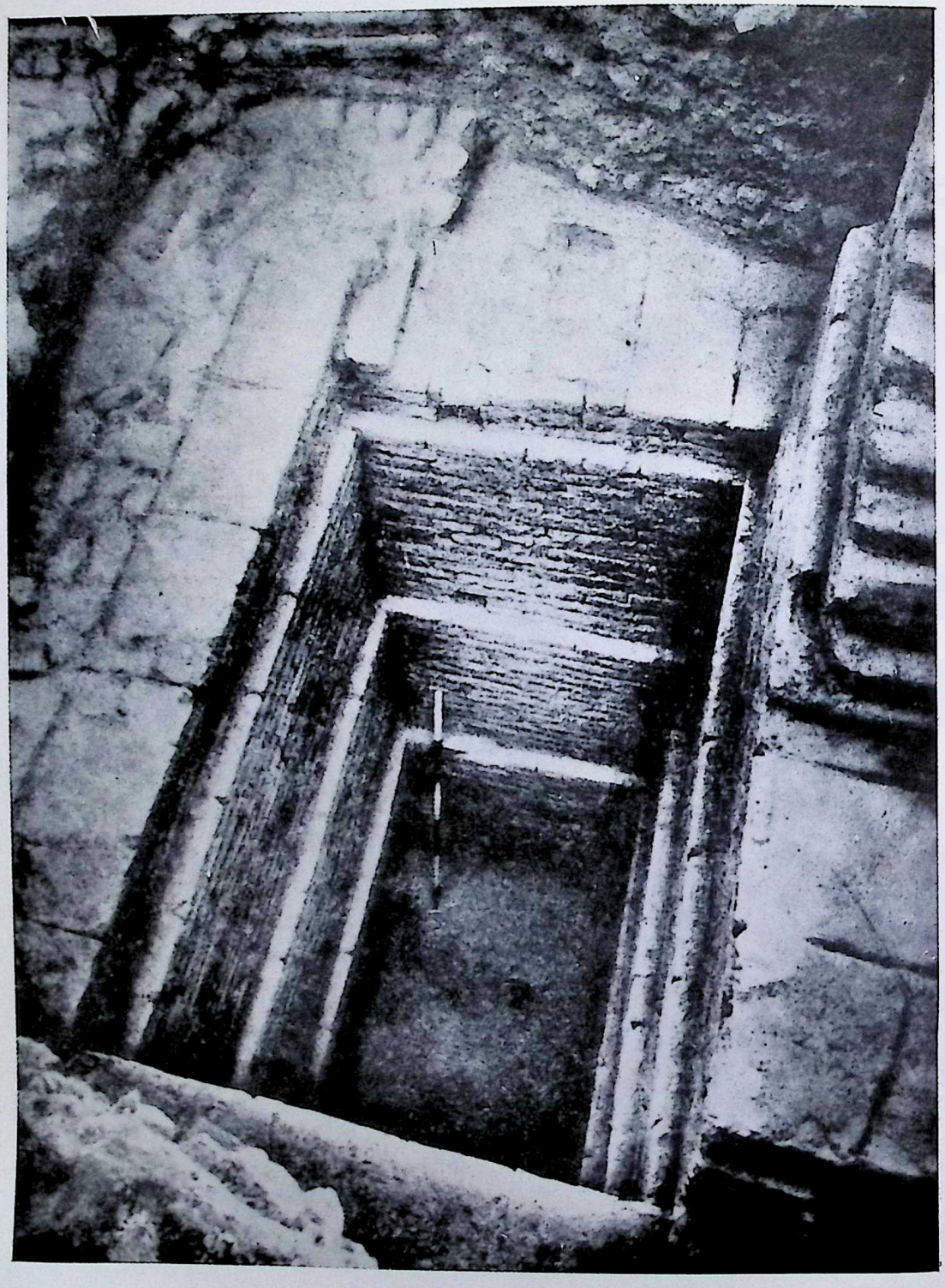

PLATE No. XXV

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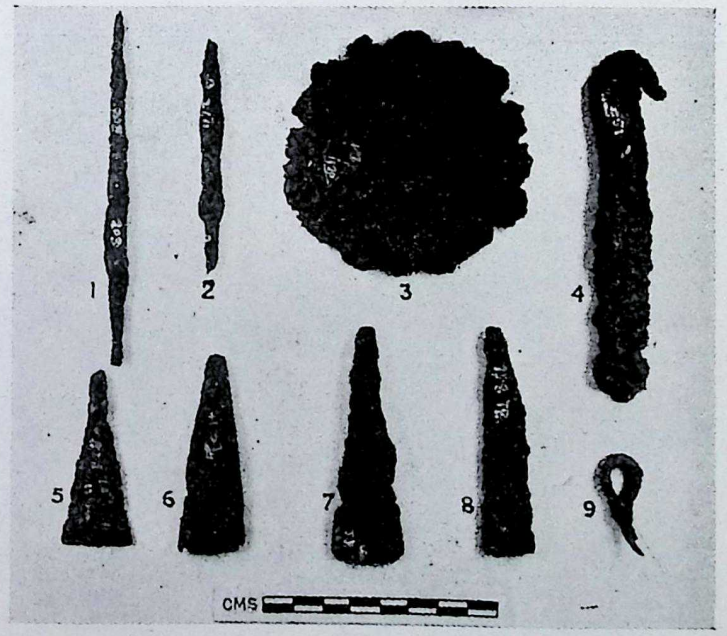
PLATE No. XXVI (A)



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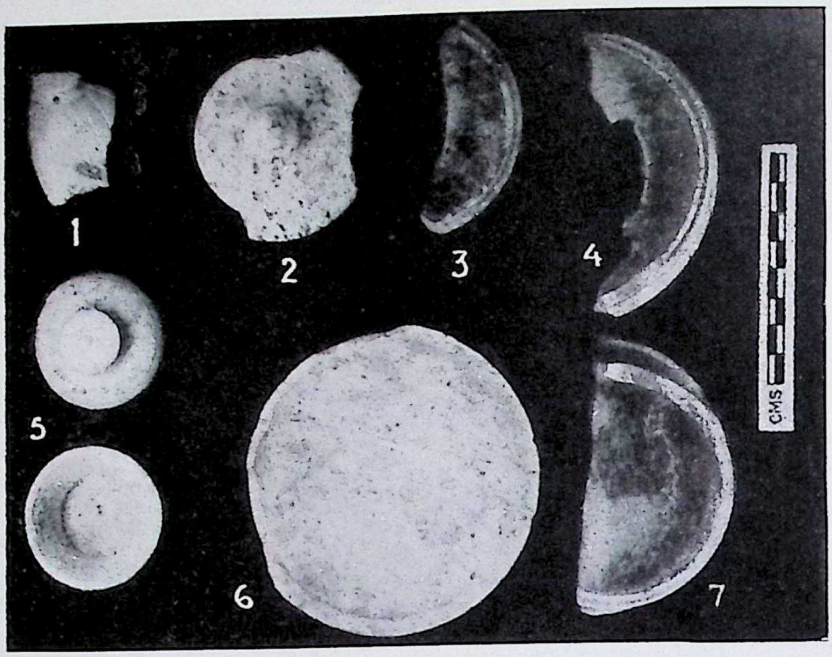

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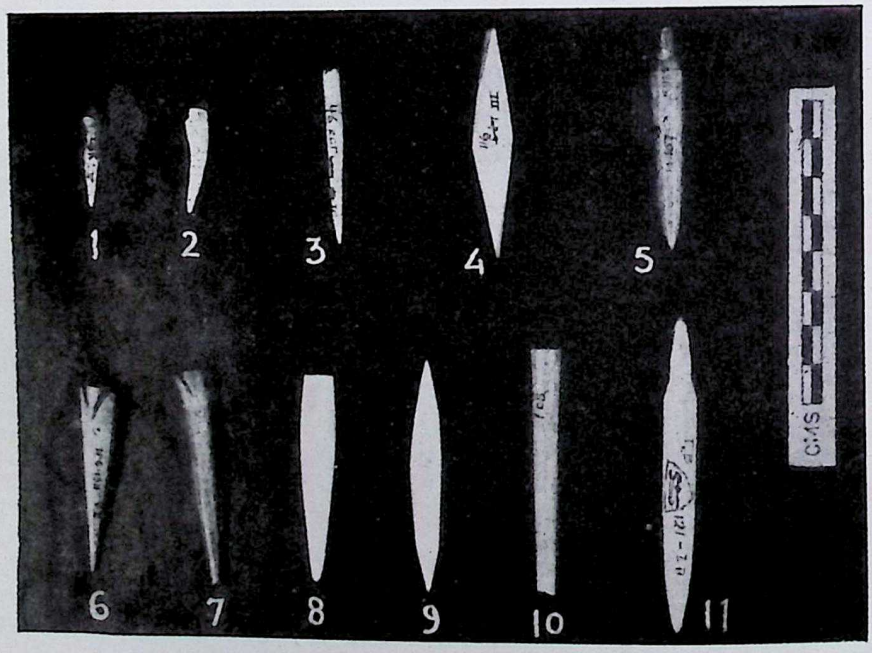

PLATE No. XXVII (B)

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PLATE No. XXVIII (A)

PLATE No. XXVIII (B)

PLATE No. XXVIII (C)

PLATE No. XXVIII (D)

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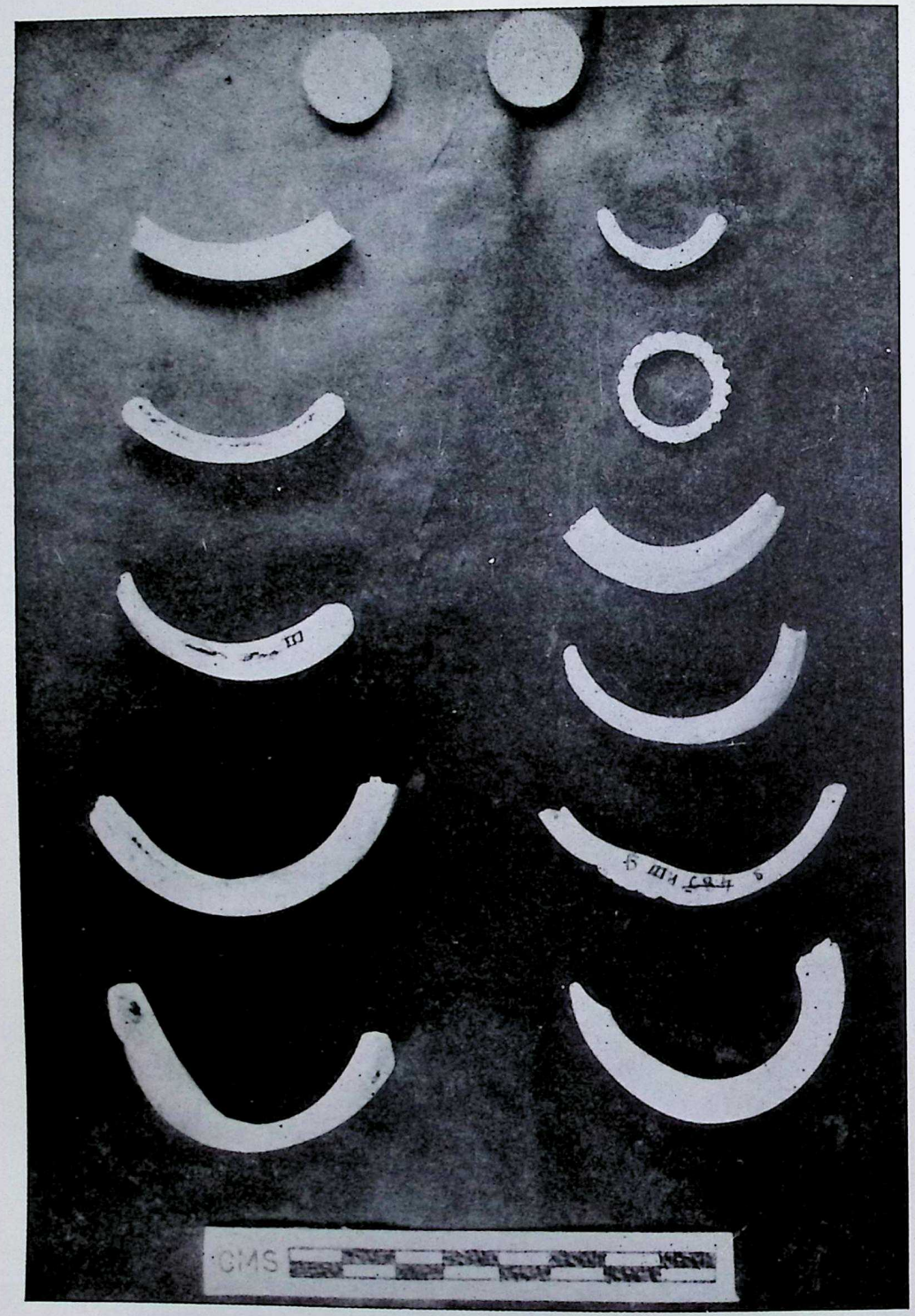

PLATE No. XXIX

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PLATE No. XXX (A)

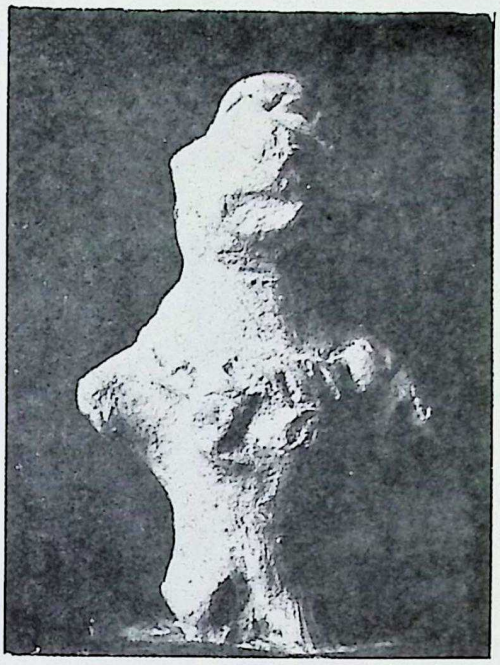

PLATE No. XXX (B)

PLATE No. XXX (C)

PLATE No. XXX(D)

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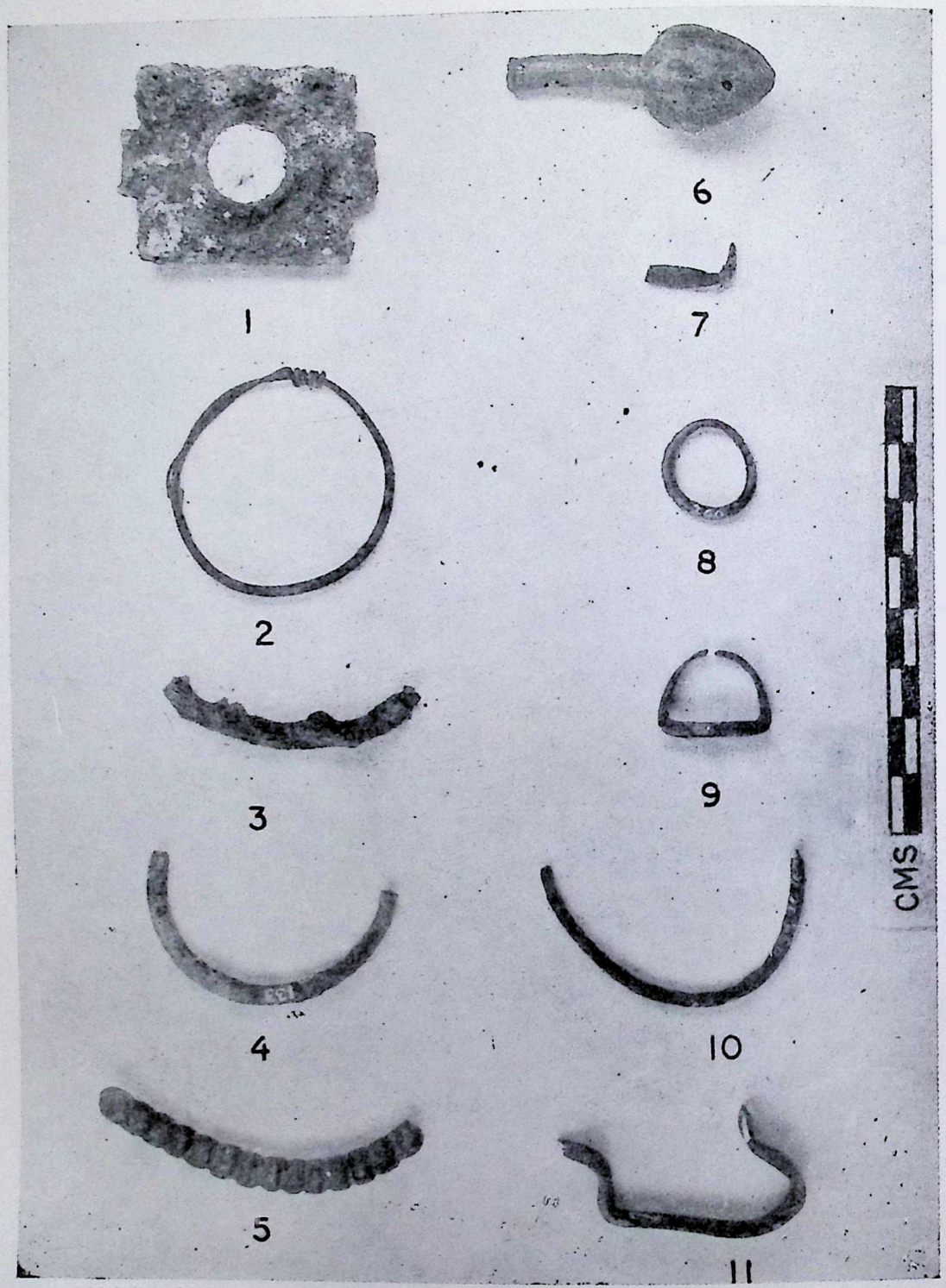

PLATE No. XXXI

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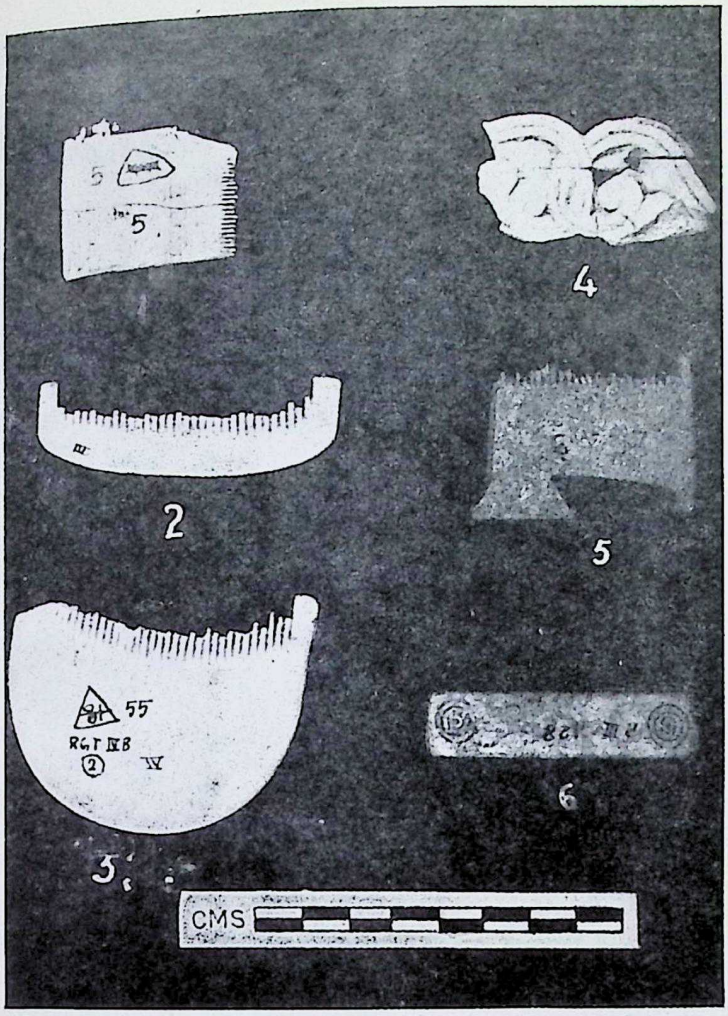
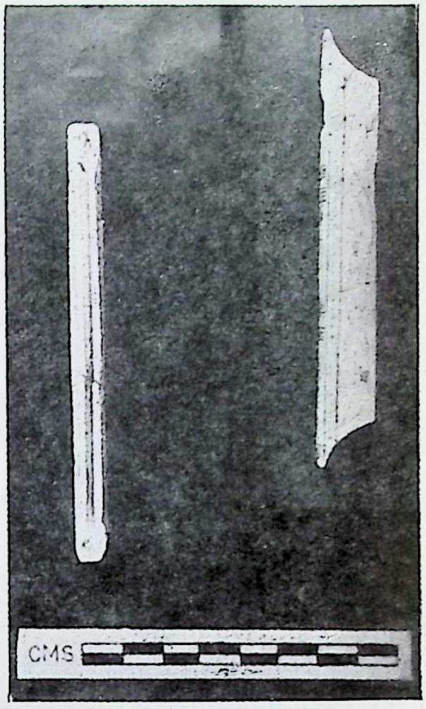


PLATE No. XXXII (A)



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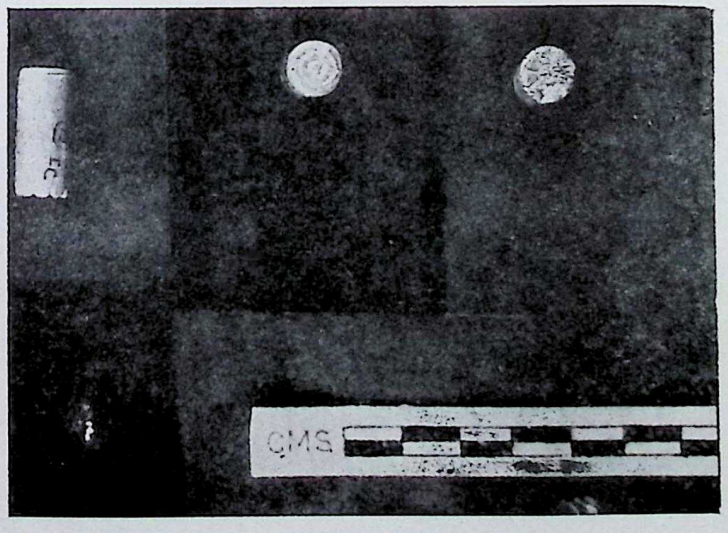

PLATE No. XXXII (C)

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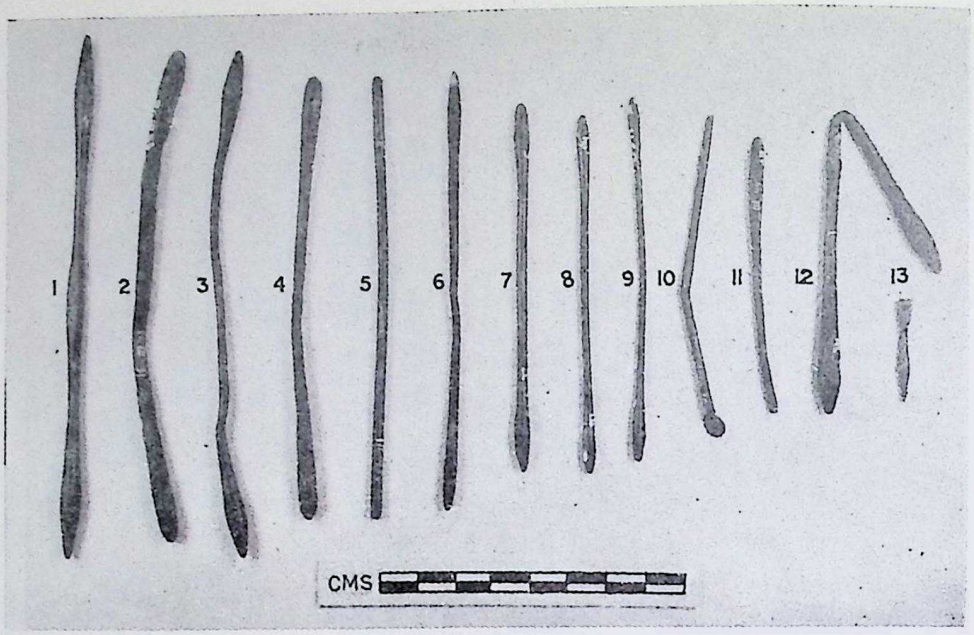
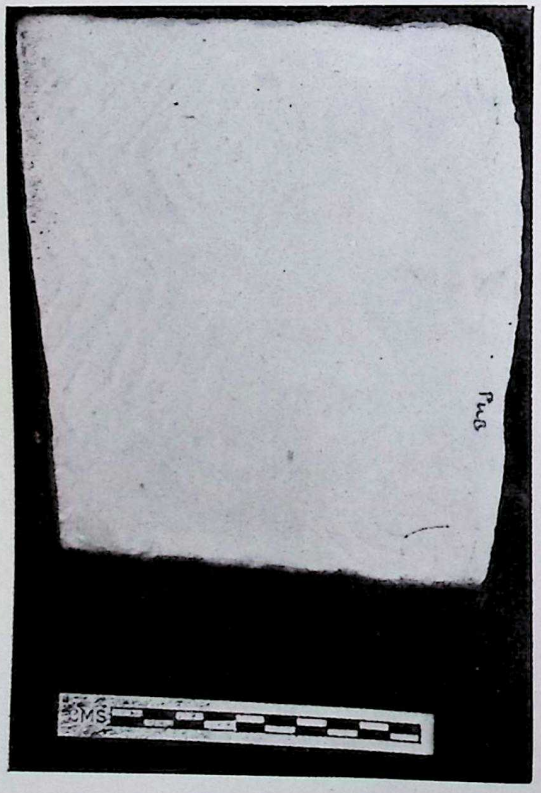


PLATE No. XXXIII (A)



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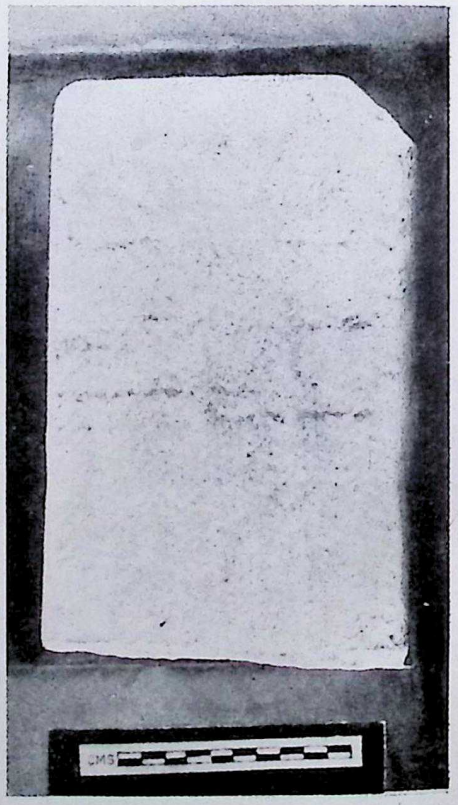

PLATE No. XXXIII (C)

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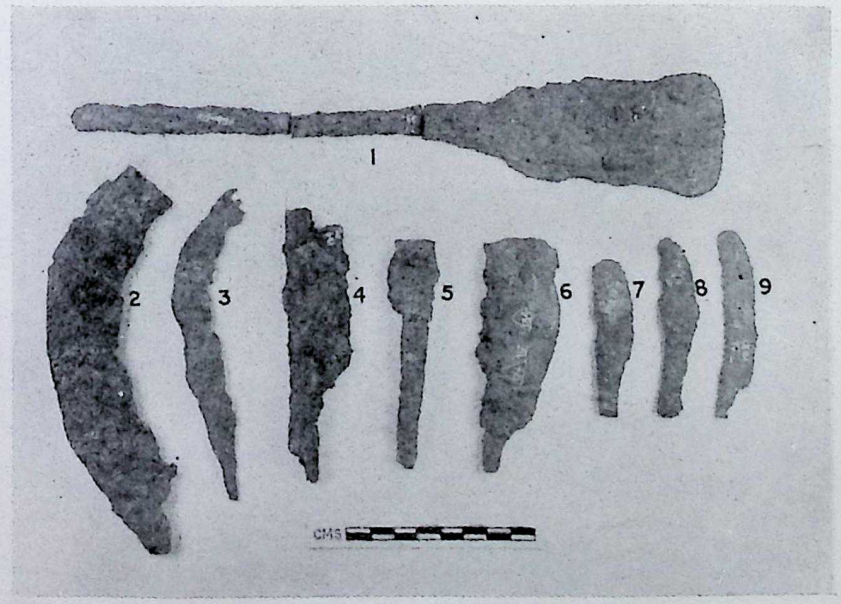
PLATE No. XXXIV (A)



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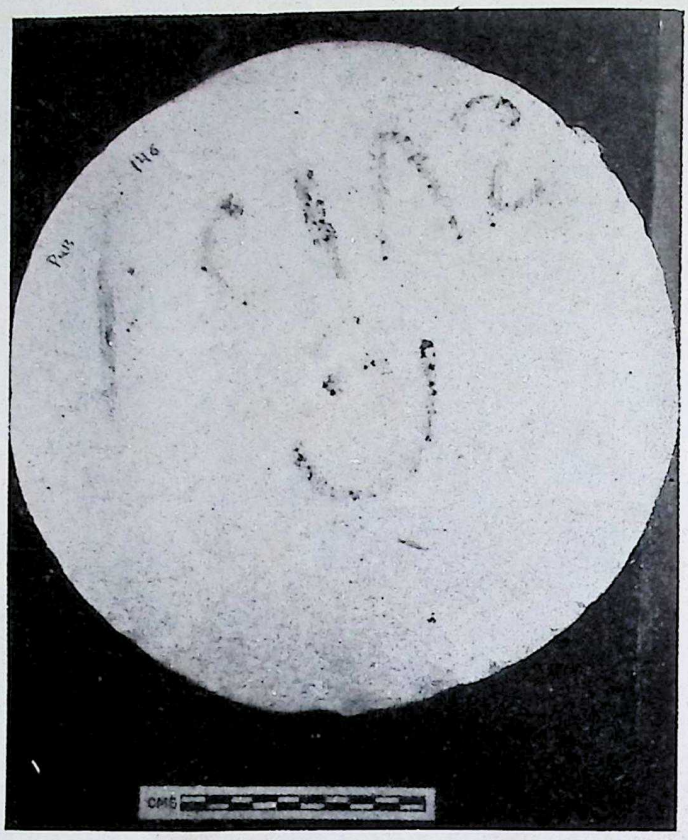

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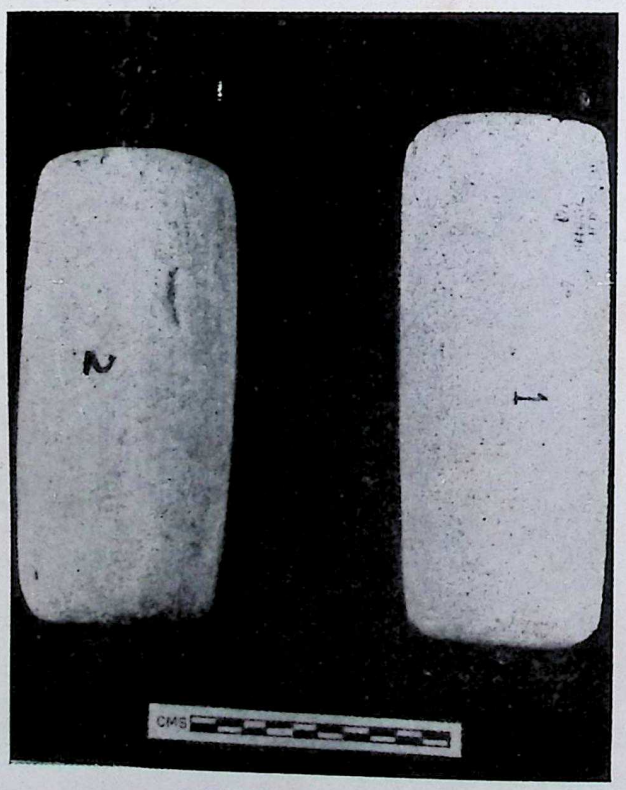

PLATE No. XXXV (B)

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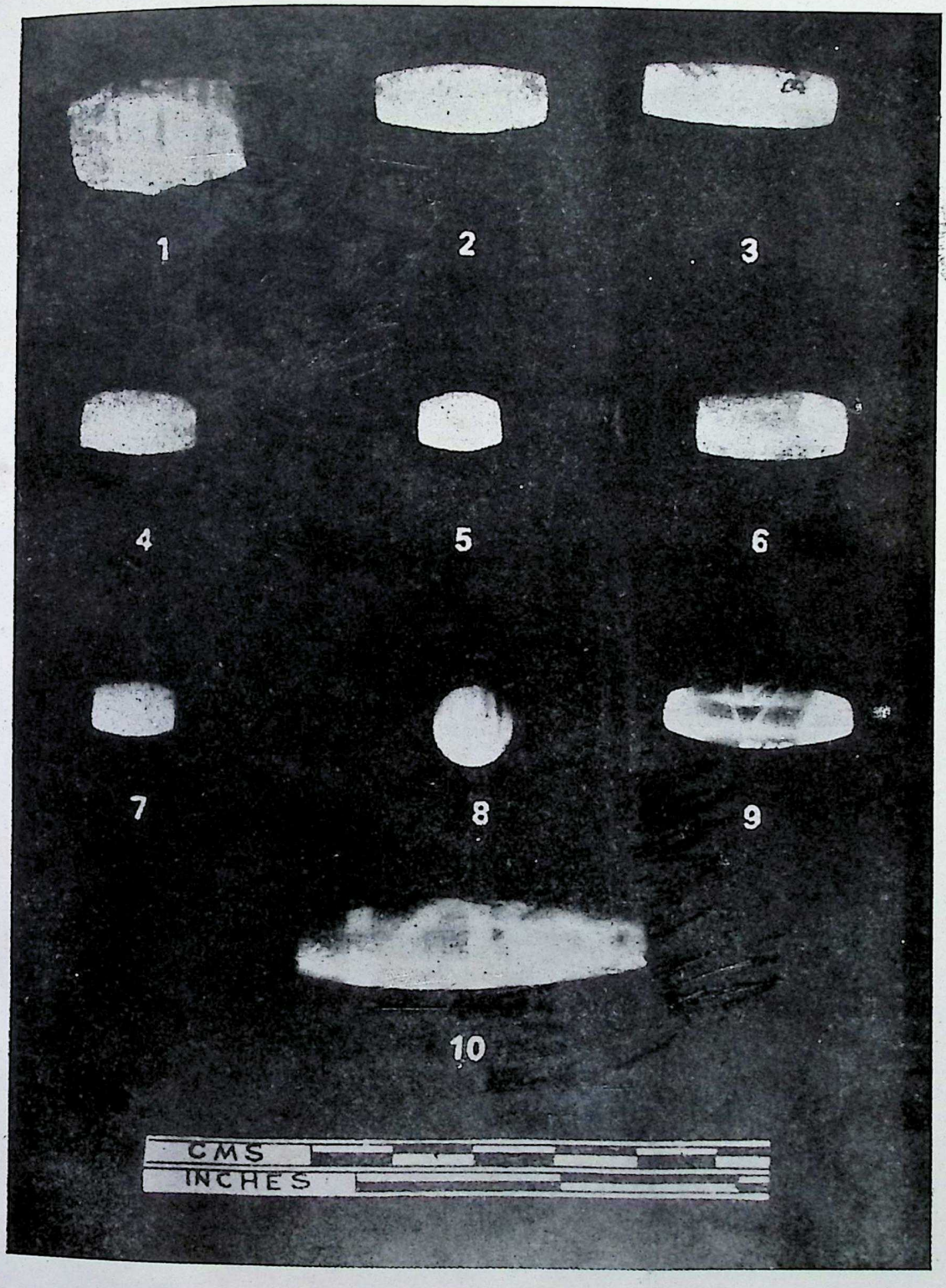

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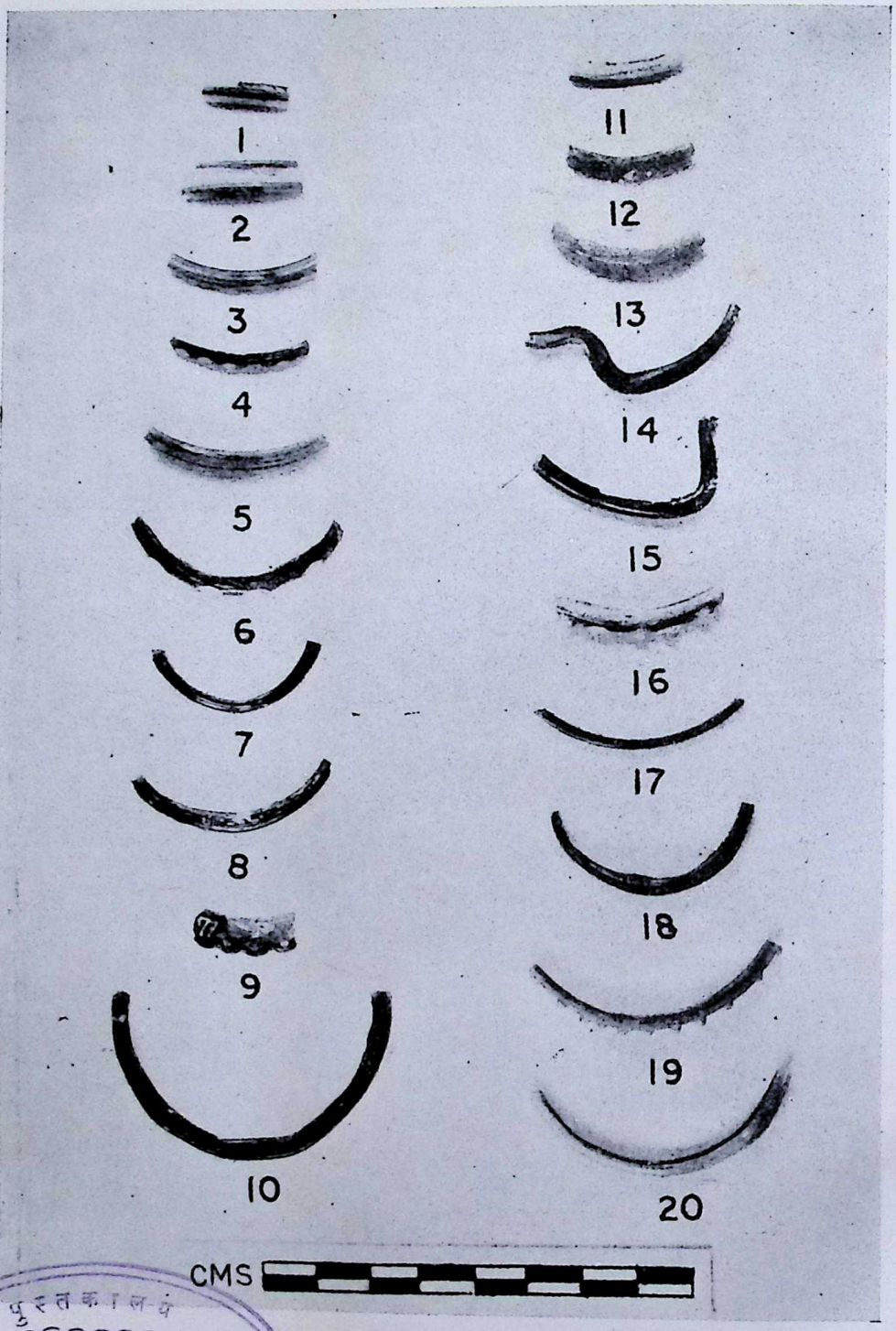

पुस्तकालय
पुस्तकालय
गुरुकुल कांगड़ी विश्वविद्यालय

PLATE No. XXXVII

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feature of this volume is the reference to the present day tradition and usage, to explain certain features of life in the past. Perhaps in no other city the past is so much enshrined in the present as in Varanasi and this is thus a recurrent theme in this volume. The present work broadly includes a Ph.D. thesis awarded by the Banaras Hindu University.

Dr. Birendra Pratap Singh (b. 1943) is a senior lecturer in the Department of Ancient Indian History Culture and Archaeology in the Banaras Hindu University. Besides teaching and guiding Ph.D. dissertations in Archaeology and various aspects of ancient Indian History and culture, he has been actively engaged in archaeological field work and research, for about two decades. His specialized training in archaeology by the Archaeological Survey of India, is testified by his successful completion of Post-Graduate Diploma course in Archaeology. Dr. Singh's participation in the excavations at a number of sites, such as Rajghat, Prahladpur, Sarai-Mohana, Bhitari, Kampilya and Kalibangan, has infused deep insight and understanding of the problems and issues of the Protohistoric and early historic phases of India in particular, and, archaeology in general. Besides, he also has the credit of exposing some of the important architectural remains of the Kushan and the Gupta townships at Rajghat (1977-78), the details of which have been incorporated in the present book. For the last four years Dr. Singh has been co-directing one of the major archaeological projects of eastern Uttar Pradesh. His excavations at Khairadih in Ballia district has yielded remains of a chalcolithic settlement and a Kushan age township.

Dr. Singh has published several papers in various journals of national repute and the present work is an outcome of his Ph.D. thesis on which he was awarded the degree of DOCTOR OF PHILOSOPHY by the Banaras Hindu University in the year 1980.

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Sundeep Prakashan
DELHI

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